

Copie, Senior Assistant Postmaster General,
Finance Group)

7. Capital Investments:

a. South Florida Mail Processing Center.
(Stanley W. Smith, Assistant Postmaster
General, Facilities Department)

b. Multiline Optical Character Reader and
Bar Code Sorter Automation. (Warren P.
Denise, Acting Assistant Postmaster General,
Engineering and Technical Support
Department)

8. Tentative Agenda for January 9-10, 1989,
meeting in Washington, DC.

David F. Harris,

Secretary.

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Part II

Environmental Protection Agency

40 CFR Part 60

Standards of Performance for New
Stationary Sources: VOC Emissions From
Petroleum Refinery Wastewater Systems;
Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 60

[AD-FRL 3387-1]

Standards of Performance for New Stationary Sources; VOC Emissions From Petroleum Refinery Wastewater Systems

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Standards of performance for volatile organic compound (VOC) emissions from petroleum refinery wastewater systems were proposed in the Federal Register on May 4, 1987 (52 FR 16334). This action promulgates standards of performance for VOC emissions from petroleum refinery wastewater systems. These standards implement Section 111 of the Clean Air Act and are based on the Administrator's determination that VOC emissions from petroleum refinery wastewater systems cause, or contribute significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare. The intended effect of these standards is to require new, modified, and reconstructed petroleum refinery wastewater systems to implement a combination of equipment, work practice, design, and operational standards that represents the best demonstrated system of continuous emission reduction, considering costs, nonair quality health and environmental impact and energy requirements.

EFFECTIVE DATE: November 23, 1988.

Under section 307(b)(1) of the Clean Air Act, judicial review of the actions taken by this notice is available *only* by the filing of a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit within 60 days of today's publication of this rule. Under section 307(b)(2) of the Clean Air Act, the requirements that are the subject of today's notice may not be challenged later in civil or criminal proceedings brought by EPA to enforce these requirements.

ADDRESSES: Background information document. The background information document (BID) for the promulgated standards may be obtained from the U.S. EPA Library (MD-35), Research Triangle Park, North Carolina 27711, telephone number (919) 541-2777. Please refer to "VOC Emissions from Petroleum Refinery Wastewater Systems—Background Information for Promulgated Standards" (EPA-450/3-

85-001b). The promulgation BID contains: (1) A summary of all the public comments made on the proposed standards and the Administrator's response to the comments; (2) a summary of the changes made to the standards since proposal; and (3) the final Environmental Impact Statement, which summarizes the impacts of the standards.

Docket. A docket, number A-83-07, containing information considered by EPA in development of the promulgated standards, is available for public inspection between 8:00 a.m. and 3:30 p.m., Monday through Friday, at EPA's Central Docket Section, Room 4, South Conference Center, 401 M Street, SW., Washington, DC 20460. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Mr. James F. Durham, Chemicals and Petroleum Branch, for the technology aspects at (919) 541-5672 or, for the regulatory aspects, Mr. Doug Bell at (919) 541-5568 or Ms. Debbie W. Stackhouse at (919) 541-5258, Standards Development Branch, Emission Standards Division (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711.

SUPPLEMENTARY INFORMATION: The following outline is provided to aid in reading the preamble to the final regulation:

- I. The Standards
 - A. Affected Facilities
 - B. Requirements of the Standards
 - C. Selection of Format for the Standards
- II. Summary of Impacts
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I. The standards

Standards of performance for new sources established under section 111 of the Clean Air Act reflect:

* * * application of the best technological system of continuous emission reduction which (taking into consideration the cost of achieving such emission reduction, any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated [section 111(a)(1)].

For convenience, this will be referred to as "best demonstrated technology" or "BDT."

A. Affected Facilities

The affected facilities to which these standards apply include: (1) Individual drain systems; (2) oil-water separators; and (3) individual drain systems with their ancillary downstream wastewater components, including sewer lines and oil-water separators (i.e., an aggregate facility as described below). The emission points to be regulated include: Drain openings; junction box covers; sewer lines; oil-water separators; slop oil facilities, including tanks and conditioning equipment; any connections or openings of these components from which VOC vapors might be emitted; and VOC control devices used to comply with the standards.

All refinery wastewater system components downstream of the oil-water separator (with the exception of slop oil facilities) have been excluded from coverage under the regulation. This includes two groups of components: (1) Air flotation systems, including dissolved air flotation systems (DAF's) and induced air flotation systems (IAF's); and (2) equalization basins and other auxiliary tanks, basins, and equipment located between the oil-water separator and the downstream air flotation system.

Individual drain systems include all process drains and sewer lines connected to the first downstream junction box. Except as noted in § 60.690(b) of the regulation, the definition for individual drain systems includes all such drains systems and the common junction box, together with the associated sewer lines and other junction boxes down to the receiving oil-water separator. Each individual drain system constitutes a separate affected facility.

Oil-water separators include the separation tank (which also includes the forebay and other separation basins), skimmers, weirs, grit chambers, and sludge hoppers. Slop oil facilities, including tanks, are also included in the oil-water separator definition as are other storage vessels and auxiliary equipment, which receive or store oily wastewater and are located between individual drain systems and the oil-water separator. Each oil-water separator that receives oily wastewater also constitutes a separate affected facility.

Because refinery wastewater systems are highly interrelated sources of VOC emissions, VOC controls on entire wastewater systems prior to and including the oil-water separation system are environmentally prudent and

within the range of reasonable costs. Thus, the aggregate affected facility includes all the emission points that are functionally related down to and including the oil-water separators [that is, each individual drain system together with its ancillary downstream treatment components (including all drains and common junction box, together with their associated sewer lines and other junction boxes down to and including the primary and secondary oil-water separators)]. However, because the emission points covered by the standards are often constructed or modified on an individual basis, the affected facilities also include each individual drain system and each oil-water separator.

The standards exempt segregated stormwater sewer systems used for the sole purpose of collecting stormwater runoff from the plant premises. Each modified or reconstructed individual drain system that has a catch basin (as defined in § 60.691) in the existing configuration is exempt from the requirements for individual drain systems. The rule also exempts surge tanks that receive only stormwater runoff or non-contact cooling water, and any other tanks or basins that are used for storing non-VOC products such as caustic or coagulant.

B. Requirements of the Standards

For process drain systems, water seal controls must be installed on drains. Junction boxes must have tight-fitting covers. Junction box covers may include an open vent pipe of a specified size to relieve any buildup of vapor pressure. Each modified or reconstructed individual drain system that has a catch basin in the existing configuration is exempt from the requirements for individual drain systems. Sewer lines in all new, modified, and reconstructed individual drain systems are required to be covered to the interconnection with the receiving oil-water separator.

For oil-water separators with a design capacity to treat more than 16 liters per second (250 gallons per minute) of refinery wastewater, a fixed roof and closed vent system that directs vapors to a control device must be installed. The control device must be a vapor recovery or destruction device designed and operated to recover or destroy VOC with an efficiency of 95 percent or greater. Smaller oil-water separators must be equipped with a fixed roof, but need not install a closed vent system and control device.

The final rule has been clarified as to what is required when an oil-water separator that was already fully or partially covered at the time of proposal

is modified or reconstructed. A modified or reconstructed oil-water separator shall be equipped with a roof over the entire separator tank. If, at the time of proposal (May 4, 1987), a separator was already equipped with a fixed roof over the entire separator tank and the facility is subsequently modified or reconstructed, the roof shall be tightly sealed. If the separator has a design capacity to treat 38 liters per second (600 gallons per minute) or more of refinery wastewater, the vapor space shall be vented to a VOC recovery or destruction control device. As an alternative to a fixed roof vented to a control device, a floating roof may be installed over the entire separator tank.

If a partial fixed roof was in place at the time of proposal over a portion of the separator tank and the oil-water separator has a maximum design capacity to treat 38 liters per second (600 gallons per minute) or more, upon modification or reconstruction the remainder of the oil-water separator shall be covered with a fixed roof and the vapor space shall be vented to a control device. As an alternative to a fixed roof and control device, the partial fixed roof may be removed and the entire oil-water separator covered with a floating roof.

If a partial fixed roof was in place over a portion of the separator tank at the time of proposal and the oil-water separator has a maximum design capacity to treat less than 38 liters per second (600 gallons per minute), upon modification or reconstruction the remainder of the separator tank shall be covered with either a floating roof or a tightly sealed fixed roof, but venting the vapor space to a VOC recovery or destruction device shall not be required.

The requirements for slop oil tanks have been revised slightly. Storage vessels including slop oil tanks are covered under this subpart only if they are not an affected facility under Subparts K, Ka, or Kb of 40 CFR Part 60. Storage vessels are required to be equipped with tightly sealed fixed roofs. The requirement in the proposed standards that slop oil be collected, stored, and transported in an enclosed system prior to reuse, disposal, or reentry to a process unit remains unchanged, except for the inclusion under this requirement of oily wastewater drawn from slop oil handling equipment.

Other auxiliary equipment associated with the operation of an oil-water separator is required to meet the same requirements as the oil-water separator.

Certain technologies are specified as equivalent alternatives to BDT as defined above. Completely closed drain

systems with no openings to the atmosphere are allowed in lieu of water seal controls on process drains. In the case of oil-water separators, storage vessels, and other auxiliary equipment, floating roofs are allowed as an alternative technology. The roof is required to have a liquid-mounted primary seal and a secondary seal, with both seals meeting certain minimum gap requirements.

The definition of "volatile organic compound" has been deleted from the final regulation because it is already defined in § 60.2 of the General Provisions.

The aggregate affected facility definition included in the proposed standards has been retained, but includes two changes. First, air flotation systems and other equipment downstream of the oil-water separators (with the exception of slop oil facilities) are not covered under the final standards. Second, installation of a new individual drain system (consisting of process drains connected to the first common downstream junction box), rather than any physical or operational change, is necessary to constitute a "modification" to the aggregate facility. If a new individual drain system is constructed that results in increased emissions, the individual drain system together with its ancillary downstream components down to and including the oil-water separators is an affected facility subject to the requirements for aggregate facilities, even if no capital expenditure is involved. Other physical or operational changes to the wastewater system components would constitute a modification if emissions increase and a capital expenditure is made on the facility.

As explained above, under the aggregate affected facility definition, a new individual drain system or an emissions increase from an existing drain system could cause existing downstream components to be subject to the standards. Only if the total emissions increase is offset would the wastewater components be exempt from the aggregate facility definition. Offsetting of emission increases would have to occur within the associated existing wastewater treatment facilities. Owners or operators of the facility would be required to demonstrate that emission offsets claimed at one facility would not be suppressed and thereby released to the air at some downstream location. Even though an individual drain system and existing downstream components may be exempt under the aggregate definition as a result of offsets, the new, modified or

reconstructed individual drain system may constitute a separate affected facility under the individual drain system definition. Also, a downstream oil-water separator may constitute a separate affected facility under the oil-water separator affected facility definition.

Initial performance tests are required only for flares used as VOC control devices to comply with the standards. The performance test required for flares is a test to confirm operation according to design specifications and is not an emission test.

Initial and periodic visual or physical inspections of water seals in drains are required. After the initial inspection, water seals on drains that are in active service are to be inspected each month. Water seals on drains not in active service are to be inspected weekly. Alternatively, if a tightly sealed cap or plug is installed on the inactive drain, only semiannual visual inspections are required. Initial and semiannual visual inspections are also required for covers on junction boxes, joints and covers on sewer lines, and fixed roof seals, doors, hatches and other openings on oil-water separators or auxiliary equipment to identify cracks, gaps, or other problems that could result in VOC emissions.

Owners or operators who install floating roofs on oil-water separators, storage vessels, or auxiliary equipment must determine the maximum gap widths between the primary seal and the wall of the separator and between the secondary seal and the wall of the separator within 60 days of the initial installation of the floating roof and introduction of refinery wastewater or 60 days after the equipment is placed back in service. These maximum gap widths are to be determined once every 5 years thereafter for the primary seal, and once every year thereafter for the secondary seal. If any oil-water separator ceases to receive or treat wastewater for a period of 1 year or more, subsequent introduction of refinery wastewater will be considered an initial introduction, requiring gap widths to be measured within 60 days.

Initial and semiannual monitoring of emissions from closed vent systems using a portable hydrocarbon analyzer is required to determine if there are detectable emissions (500 ppm above background levels). The EPA Method 21 would be the applicable test method. The requirement to ensure "no detectable emissions" from seams, joints, seals, and gaskets on junction boxes, oil-water separators, and other equipment having atmospheric or pressure control vents has been deleted in the final standards.

To ensure that a vapor recovery or destruction device is operating properly, the owner or operator is required to monitor the vapor flow to the control device, outlet VOC concentration or organics levels (or inlet and outlet for carbon adsorbers), or other parameters. All gauging and sampling devices on systems equipped with a control device must be kept gas-tight, except when gauging or sampling is taking place.

The reporting and recordkeeping requirements of the General Provisions apply. In addition, the design and operating specifications for all equipment used to comply with these standards are required to be maintained in a readily accessible location. Such specifications shall include the parameters to be monitored on all systems equipped with a closed vent system and control device. Initial and semiannual reports are required that certify that all inspections have been carried out. Records of each inspection where a water seal is dry or breached, a cap or plug is out of place, emissions are detected, or a problem is identified, including information about the repairs or corrective action taken, must be maintained in a readily accessible location and submitted semiannually in a summary report.

The recordkeeping and reporting requirements applicable to closed vent systems have been revised to require that certain information about the operation of the control device be maintained. For facilities using a thermal incinerator, continuous records must be maintained of the temperature of the gas stream in the combustion zone of the incinerator. Also, records of all 3-hour periods during which the average temperature of the gas stream in the combustion zone of the thermal incinerator is more than 28 °C (50 °F) below the design temperature must be maintained and reported semiannually. Similarly, for facilities using catalytic incinerators, continuous records of the temperature of the gas stream both upstream and downstream of the catalyst bed must be maintained. Also, records of all 3-hour periods during which the average temperature measured before the catalyst bed of a catalytic incinerator is more than 28 °C (50 °F) below the design gas stream temperature, and all 3-hour periods during which the average temperature difference across the catalyst bed is less than 80 percent of the design temperature difference across the catalyst bed must be maintained and reported semiannually. For facilities using a carbon adsorber, continuous records of the VOC concentration level or reading of organics of the control

device outlet gas stream or inlet and outlet gas stream must be maintained. Records of all 3-hour periods during which the average VOC concentration level in the exhaust gases of a carbon adsorber is more than 20 percent greater than the design concentration level must be reported semiannually to the Administrator.

C. Selection of Format for the Standards

For petroleum refinery wastewater systems, a combination of equipment, work practice, design, and operational standards was selected. Under this approach, equipment representing BDT is required. However, procedures are included to allow alternative control equipment to be used if equivalent emission reductions can be demonstrated. Certain equivalent alternatives are allowed in the standards.

The standards require certain work practices to ensure that the control equipment installed is properly maintained. For example, regular inspections of water seals by owners or operators are required to ensure that proper water levels are maintained. Design standards are required for control devices to ensure that the type of system installed has the design capability to achieve emission reductions determined by EPA to reflect BDT.

Performance standards would allow for some flexibility in complying with the standards, since any control technique may be used if it achieves the level of emission reduction represented by the standard. However, for most refinery fugitive VOC emission sources, such as refinery wastewater systems, it is not feasible to prescribe performance standards because measurement of emissions from these sources is impractical or economically infeasible. Based on the considerations discussed below, it is not feasible to prescribe performance standards for refinery wastewater systems except where a flare is used as the control device.

Determining compliance with standards of performance for individual drain systems would be prohibitively expensive. Each drain would need to be bagged and vented in a manner that would allow the measurement of pollutant concentrations and flowrates. The cost of conducting performance tests on the numerous drains in an entire refinery or even a single refinery process unit would be unreasonably expensive.

In the case of oil-water separators, the principal limitation with standards of performance concerns the difficulty in

measuring emission levels. Emission levels can vary considerably over relatively short periods of time depending on inlet oil concentrations, wastewater flowrates through the separator, and other factors. Even though in some cases the flowrate to an oil-water separator may remain relatively constant, the VOC emissions change periodically as the time of day or upstream process conditions change. In addition, vapor recovery or destruction devices are not expected to be dedicated to a specific wastewater stream. Emissions measurement of a nondedicated system would be complicated and perhaps meaningless. Thus, standards of performance would require continuously measuring emission levels. This would be an unreasonably expensive and impracticable approach to setting the proposed standards.

II. Summary of Impacts

A. Environmental Impacts

Approximately 100 newly constructed process unit drain systems are expected to be covered by the standards during the 5-year period 1985-1989. These systems will include approximately 5,000 drains and 1,000 junction boxes. Approximately 30 new oil-water separators are also expected to be covered by the standards during the 5-year period. In addition, it is expected that a total of at least 18 modified or reconstructed process drain systems will be affected by the standards. A small number of modified or reconstructed oil-water separators will also be affected by the standards.

The standards will reduce emissions of VOC from process drain systems by about 50 percent in comparison to the emissions that would result in the absence of the standards. An emission reduction of about 88 percent would result from oil-water separators in comparison to the emissions that would result under existing State and local regulations. For separators that would be built in States that do not currently regulate them, the emission reductions achieved by these standards would generally exceed 95 percent for individual facilities. The overall emission reduction from all facilities covered by the standards is estimated to be 2,020 Mg/yr (2,225 tons/yr) in the fifth year of implementation. This is about 60 Mg/yr (65 tons/yr) less than the proposed standards and reflects the exclusion of air flotation systems from the final standards.

The VOC emitted from wastewater treatment systems contribute to atmospheric photochemical reactions.

These reactions form ozone, which is harmful to human health and welfare. Reduction of VOC emissions from newly constructed, modified, and reconstructed refinery wastewater systems would at the same time reduce emissions of any toxic constituents which may be in the wastewater streams.

The standards will not have an adverse impact on water quality. The control techniques will not interfere with the basic water treatment function of oil-water separators and air flotation systems. Further, suppression of VOC in the wastewater by covering separators will not result in a significant increase in organic loading to subsequent treatment process. Volatile organic compounds have a greater affinity for the oil phase of wastewater than for the water phase. To the extent that control techniques suppress emissions of VOC, these VOC will mostly be captured in the slop oil that is removed at the oil-water separator and reused or recycled.

Further, there will be no significant amount of solid waste produced as a result of the standards. There has been no change to the standards since proposal that would affect the water quality and solid waste impacts of the standards.

B. Energy Impacts

The standards will have essentially no energy impacts on the operation of process drain systems. The standards will result in consumption of small quantities of steam, water, electricity, and fuel gas for operation of control devices to destroy VOC captured from oil-water separators. There has been no change to the standards since proposal that would have a significant adverse impact on energy consumption by affected facilities.

C. Cost Impacts

The capital cost of the controls required by this regulation for individual drain systems is based on a uniform cost for each drain and junction box for installing p-traps, covers, and vent pipes. Therefore, the cost to a facility is proportional to the size of the refinery wastewater system serving the facility. All costs are presented in third quarter 1983 dollars. For a typical plant, the capital cost of the individual drain system would be \$7,600 for a new process drain and junction box system, and \$21,400 for retrofitting a process drain and junction box emissions reduction system. The annualized costs of these systems for the typical refinery wastewater system would be \$1,850 for the new drain and junction box system, and \$5,250 for a retrofitted system. The

cost effectiveness of controls on a new drain and junction box system would be \$300/Mg (\$270/ton) of VOC controlled, and for a retrofit system would be \$850/Mg (\$770/ton).

For oil-water separators, the capital and annualized costs have increased slightly since proposal due to the addition of the cost of fuel gas to purge the oil-water separator to a vapor recovery or destruction device. The capital cost of covering the separator and installing vapor control would be \$30,300 for a new facility using an existing control device for vapor control. The annualized cost of the new system with existing controls would be \$22,800, with an average cost effectiveness of \$140/Mg (\$130/ton) of VOC removed.

For retrofitting an oil-water separator with controls to comply with the regulations, the capital cost would be \$41,800 for a system using existing vapor controls. The annualized cost of the retrofit system using existing controls would be \$25,800, with an average cost effectiveness of \$160/Mg (\$150/ton) of VOC.

The national fifth year annualized costs of the regulation to affected facilities are approximately \$200,000 for retrofit facilities and approximately \$1.1 million for new facilities.

D. Economic Impacts

The standards for petroleum refinery wastewater systems will have very little impact upon either the firms that refine petroleum products or on the consuming public. Market forces alone will greatly affect the price of refined petroleum products. These factors include the price of domestic and imported crude oil and the proportions of each used by domestic refineries; the prices of alternative sources of energy; the growth of the United States and international economies; and the costs of other inputs into the refinery industry. If the costs of the standards are also considered, the prices of refined products would show very little additional increase, estimated approximately \$0.03 per cubic meter (less than \$0.01/barrel), or less than 0.1 percent. No significant reduction in demand for refined products or in the profitability of growth of the refining industry is expected to result from the implementation of this regulation.

The environmental, energy, cost, and economic impacts are discussed in greater detail in the two BID volumes: (1) "VOC Emissions From Petroleum Refinery Wastewater Systems—Background Information for Proposed Standards" (EPA-450/3-85-001a), and (2) "VOC Emissions From Petroleum Refinery Wastewater Systems—

Background Information for Promulgated Standards" (EPA-450/3-85-001b).

III. Public Participation

Prior to proposal of the standards, interested parties were advised by public notice in the *Federal Register* (49 FR 66807, June 29, 1984) of a meeting of the National Air Pollution Control Techniques Advisory Committee to discuss the VOC emissions from petroleum refinery wastewater systems recommended for proposal. This meeting was held on August 29, 1984. The meeting was open to the public and each attendee was given an opportunity to comment on the standards recommended for proposal.

The standards were proposed and published in the *Federal Register* on May 4, 1987 (52 FR 16334). The preamble to the proposed standards discussed the availability of the proposal BID, which described in detail the regulatory alternatives considered and the impacts of those alternatives. Public comments were solicited at the time of proposal, and copies of the proposal BID were distributed to interested parties.

Opportunity for interested persons to present data, views, or arguments concerning the proposed standards at a public hearing was provided. However, there were no requests for such a hearing and, therefore, no hearing was held.

The comment period extended from May 4, 1987 to July 20, 1987. Twelve comment letters were received concerning issues relative to the proposed standards of performance for petroleum refinery wastewater systems. The comments have been carefully considered and, where determined to be appropriate by the Administrator, changes have been made in the proposed standards.

IV. Significant Comments and Changes to the Proposed Standards

Comments on the proposed standards were received from industry representatives, one trade association, and one equipment vendor. A detailed discussion of these comments and responses can be found in the promulgation BID. The summary of comments and responses in the BID serves as the basis for the revisions that have been made to the standards between proposal and promulgation.

The major comments and responses have been summarized in this preamble. Most of the comment letters contained multiple comments. The major comments have been divided into the following areas: Applicability of the Standards, Definition of Affected

Facility and Modification/ Reconstruction, Selection of Control Technology, and Monitoring Requirements. Responses to comments not discussed below can be found in the promulgation BID to this rulemaking (see "Addresses" section).

A. Applicability of the Standards

One commenter recommended that a provision be included in the standards that would exempt facilities with oily wastewater streams containing only heavier hydrocarbon compounds. Streams containing only these compounds would be expected to have lower emissions than streams containing lighter, more volatile compounds. The commenter specifically recommended that this exemption be in the form of a minimum vapor pressure requirement of 1.5 psia. Another commenter suggested that the exemption be implemented through the use of a minimum relative volatility level. Without such an exemption, the commenters stated, the standards would impose an economic burden on some facilities without accomplishing a significant reduction in VOC emissions.

A cutoff based on vapor pressure or other measure of volatility for oily wastewater streams was considered during the development of the proposed regulation, but was not adopted because the total vapor pressure of the organics in the wastewater has the potential to vary widely and may change with wastewater loading, composition, and temperature. Among other factors that influence the rate of volatilization are ambient temperature, wind speed over the basin, and the thickness of the oil layer.

An industry survey showed that the organic loading can vary by orders of magnitude for the same wastewater system (see Docket Item No. II-B-45). Although there are no data to reflect the degree of change in organic composition of the wastewater, these changes can result from the loading variations, upset conditions, changes in operation, and the addition of new process units. For these reasons, a vapor pressure cutoff has not been included in the final standards.

Seven commenters objected to the requirement for installation of fixed roofs on DAF's. The concerns range from poor cost effectiveness (mainly due to low emissions potential); to safety (because of safety concerns, it may be necessary to purge the fixed roof to a VOC recovery or destruction device); to operation (roof would interfere with operation, reduce downstream water quality); and to maintenance (roof would hinder regular maintenance).

In response to these comments, EPA undertook a thorough reexamination of the technical, economic, and environmental bases of the application of the NSPS to air flotation systems, focusing specifically on the safety problems and the low emission potential of air flotation systems. As a result of this reexamination, the final standards have been revised to exempt air flotation systems, including both DAF's and IAF's.

The analysis undertaken by the Agency included a telephone survey of refiners with fixed roofs installed on their DAF's, as well as a review of the responses to a telephone survey of vendors conducted prior to the proposal. Further, DAF float disposal methods were reviewed to evaluate potential downstream impacts of controlling these systems. As a result of this analysis, the Agency has determined that a DAF controlled with a tightly sealed roof may pose safety concerns that were not adequately addressed by the proposed standards. An unvented fixed roof may present an explosion and fire hazard in some types of air flotation systems due to the buildup of explosive vapors inside the cover. By purging the space beneath the fixed roof with another gas, such as nitrogen, these safety concerns can be alleviated. For a system with the vapor space purged and vented to a control device, the incremental cost effectiveness was estimated to be over \$13,000/Mg (\$11,800/ton) of VOC. Consequently, EPA concluded there is no cost-effective method of VOC destruction or removal demonstrated for DAF's.

Fixed roof controls on air flotation systems serve to suppress VOC emissions temporarily, rather than to destroy VOC. The VOC emissions that are suppressed temporarily by the fixed roof system are merely transported downstream through air flotation effluent and froth. Consequently, about 60 Mg/year (65 tons/year) of the VOC emission reduction shown in the proposal BID actually represents the VOC suppressed temporarily by fixed roof controls on air flotation systems, but emitted downstream at uncontrolled emission points.

The Agency did consider DAF froth recycling as an alternative method for VOC control. However, recycling of froth has not been demonstrated to be a practical method of disposal for all refiners because the froth may contain additives such as coagulants. The majority of refiners landfarm or landfill froth rather than recycle it.

Taken together, these considerations led the Agency to decide that the focus

of the standards should be on the control of emissions from individual drain systems and oil-water separators, including slop oil facilities, rather than on air flotation systems. Therefore, air flotation systems are not covered by the final standards.

One commenter stated that equalization basins located upstream from the air flotation system should not be included in the definition of DAF's. According to this commenter, these are very large basins and it would be difficult to place covers on them. A cover could also be dangerous due to the large surface area and amount of potential air leaks into the cover.

Equalization basins that are part of an air flotation system have been excluded from the final standards for essentially the same reasons that air flotation systems themselves have been excluded (see above). The recommended method of VOC control was a fixed roof which, like DAF's, would suppress VOC emissions temporarily, only to be emitted at some uncontrolled location downstream. Thus, there are no cost-effective methods of VOC recovery or destruction that have been demonstrated for these facilities.

Two commenters requested clarification of the applicability of the proposed standards to slop oil from oil-water separators and of the requirement in the proposed standards that slop oil be collected and reused or disposed of in an enclosed system. The commenters stated that these requirements could extend the applicability of the standards to segments of the refinery operation beyond the wastewater system itself, and could potentially encompass the entire refinery in cases where slop oil is combined with refinery feedstock. The commenters suggested that the provision for slop oil be dropped unless a technical basis for justifying such a requirement can be demonstrated.

The final standards have been revised to clarify the scope of the regulation of slop oil and slop oil tanks. In the final standards, storage vessels, including slop oil tanks auxiliary to oil-water separators, are regulated. These storage vessels are required to be covered with a tightly sealed fixed roof. The fixed roof can be vented with a pressure relief valve that has been set at the maximum pressure necessary for proper system operation, but such that the pressure relief valve is not venting continuously. Such a requirement is both technically feasible and cost effective in view of the VOC emissions potential of these uncovered facilities.

Emissions from slop oil are regulated under this subpart until the slop oil reenters a process unit or is disposed of.

The slop oil and oily wastewater drawn from slop oil handling equipment must be collected, stored, transported, reused, recycled, or disposed of in an enclosed system (i.e., it must not be open to the atmosphere). Once slop oil is returned to the process, or is disposed of, it is no longer within the scope of this regulation. Another limitation on the applicability of this subpart to storage vessels, including slop oil tanks, is posed by the requirements of Subparts K, Ka, or Kb that regulate volatile organic liquid storage vessels, depending on the size of the facility and the vapor pressure of the liquid being stored. The NSPS for petroleum refinery wastewater systems does not apply to storage vessels subject to the requirements of Subparts K, Ka, or Kb, although the transport, recycling, reuse, or disposal of slop oil remains subject to the standards for petroleum refinery wastewater systems and must be kept in an enclosed system.

B. Definition of Affected Facility/Modification

Seven commenters recommended that the definition of an aggregate facility as a separate affected facility be deleted from the proposed regulation. The commenters stated that a refinery wastewater system is normally designed with excess capacity and VOC emissions are more related to surface area than to oil volume. Further, the commenters stated that there are no data to show that an increase in the loading of VOC-bearing wastes necessarily results in an increase in refinery wastewater VOC emissions. Therefore, in the commenters' view, it is not appropriate to require additional controls as a result of increased throughput or the addition of one new pump, process drain or process unit. The commenters recommended that the standards should be triggered only when the capacity of the wastewater system is expanded.

The EPA disagrees with the commenters' assertion that an increase in the loading of VOC-bearing wastes does not result in an increase in refinery wastewater system VOC emissions. Although the amount of wastewater surface area exposed to the atmosphere does affect emissions, the concentration of VOC in the wastewater along with other factors, such as vapor pressure and temperature, are also factors in determining the emission potential. As a result, with increases in throughput, the volatile organic loading also increases when the surface area remains constant. In EPA's view, VOC emissions can increase with increased loading even if

the capacity of the wastewater system (i.e., surface area) is not expanded.

However, in order to ensure that the application of the standards to downstream components of the wastewater system is triggered only by significant changes to the system that result in emission increases, EPA has amended the definition of affected facility in the final regulation. Under the proposed regulation, any physical or operational change made to an aggregate facility that resulted in an emissions increase would have constituted a modification, thereby making the standards applicable to the changed facility and all regulated downstream components of the wastewater system. Under the final regulation, the definition of affected facility still includes the "aggregate facility," but the definition has been amended to clarify what constitutes a modification that would bring downstream components under the regulation.

In the final regulation, a new paragraph (b) has been added to § 60.690 that states that a modification to an aggregate affected facility occurs when a new individual drain system (consisting of process drains connected to the first common downstream junction box) is constructed and tied into an existing refinery wastewater system. Under the final regulation, the new individual drain system and the components of the system downstream from the new individual drain system become an aggregate affected facility. This definition will lead to the control of VOC emissions from new individual drain systems constructed to serve new process units within the refinery, as well as from those constructed to serve existing process units.

The new paragraph (b) also specifies that the capital expenditure exemption contained in § 60.14(e)(2) of the General Provisions does not apply for the addition of a new individual drain system under this regulation. Section 60.14(e)(2) states that an increase in the production rate of an existing facility is not considered a modification if the increase does not involve a capital expenditure. A capital expenditure for petroleum refineries is considered to be any expenditure greater than 7 percent of the total capital cost of the facility. The intent of the capital expenditure clause is to exclude minor changes from coverage under the NSPS. The addition of a new individual drain system is considered a significant change to the aggregate facility, because emissions are significantly increased from downstream components of the

wastewater facility. Therefore, under the final regulation, the addition of a new individual drain system to an existing wastewater facility that results in increased emissions would constitute a modification of an aggregate facility, even if no capital expenditure is involved. The capital expenditure exemption is retained for all other physical or operational changes to wastewater treatment system components. A small physical or operational change within an existing individual drain system (such as the addition of a pump) that does not constitute a capital expenditure on the aggregate facility would not be considered a modification of the aggregate facility. However, such changes may still constitute a modification to the individual facility (i.e., the individual drain system).

C. Selection of Control Technology

One commenter stated that the technical basis for installing sewer seals for emission reduction is flawed. As described by the commenter, vapors trapped by the sewer drain seals will be emitted via the junction box to prevent the buildup of potentially explosive vapors. The commenter recommended that since sewer seals will not materially reduce emissions, this requirement should be removed from the final standards.

The overall emission reductions from process drain seals are greater than from controls on junction boxes because of the greater number of process drains within a process unit. The greater number of drains exposes more surface area and thereby provides greater opportunity for volatilization.

Based on the assumption that molecular diffusion and convection are the primary factors affecting VOC emissions from drains and junction boxes, and in light of the potential safety problems of water seals on junction boxes, vent pipes are allowed to provide safe and effective emissions control from junction boxes. Because the rate of molecular diffusion and convection are influenced by the length of the vent pipe and design of the vent pipe opening, EPA evaluated the effects of different size vent pipes. Since VOC diffusion is inversely proportional to the diffusion path length, the greater the vent pipe length, the lower the rate at which molecular diffusion can transport VOC into the air. Also, the diameter of the vent pipe opening affects the emissions due to convection. Therefore, to restrict emissions due to the effects of molecular diffusion and convection from junction box vents, EPA has determined that a vent pipe having a maximum

diameter of 10.2 centimeters (4 inches) and a minimum length of 90 centimeters (3 feet) will be required. Thus, a vent pipe is allowed to avoid safety problems, but a maximum diameter and minimum length are specified in order to restrict emissions due to the effects of molecular diffusion and convection.

D. Monitoring Requirements

Two commenters stated that the requirement for weekly inspection of water seals on drains is unnecessarily stringent and would present a significant burden to the industry given the large number and location of these drains in a refinery. According to the commenters, drains are often located in areas that are difficult or unsafe to inspect routinely. The commenters recommended that the inspection frequency for process drains be reduced to once a month. The commenters further stated that water seals also tend to be maintained by precipitation, maintenance washing, and use.

The EPA agrees that drains which are kept in active wastewater service will be maintained primarily by the refinery wastewater that is received from a process unit, as well as by precipitation and maintenance washing. Inspections are still required, however, to make sure that the water seals are present or that the seal pots are properly capped. Therefore, the inspection frequency has been reduced from weekly to monthly for drains in active service. For drains that are removed from active service, there is no assurance that precipitation or maintenance washing will maintain the water seal. Consequently, a weekly visual or physical inspection of the water seal is still required unless a tightly sealed cap or plug is installed. Only semiannual inspections are required for tightly sealed caps or plugs on drains not in active service to ensure that caps or plugs are properly in place.

Three commenters stated that the applicability of "no detectable emissions" to specific components of the refinery wastewater system and the associated requirement for monitoring using a portable hydrocarbon monitor to detect such emissions was inappropriate and that visual inspection would be sufficient. Specifically, the commenters objected to the application of the standards to equipment with fixed roof controls that are not required to be vented to a vapor recovery or destruction control device, such as junction boxes and some oil-water separators.

The final standards have been revised to delete the "no detectable emissions" monitoring requirement for junction boxes, oil-water separators, and other

components of the affected refinery wastewater system that are not vented to a vapor recovery or destruction control device. The Agency agrees with the comment that visual inspection coupled with follow-up repair and maintenance is sufficient to prevent leaks of VOC through faulty or poorly maintained joints, seals, or gaskets. Therefore, the final standards are the same as proposed for visual inspection of all joints, seams, access doors, and other emission sources on junction boxes, sewer lines, oil-water separators and any other components of the refinery wastewater system that are subject to the standards.

For oil-water separators with closed vent systems and other closed systems, such as closed drain systems, the "no detectable emissions" requirement specified in the proposed rule is maintained in the final rule. For closed vent systems, monitoring and inspection would be required of joints, seams, access doors, and other potential emission sources when the facility becomes subject to the standards, and semiannually thereafter to ensure that there are "no detectable emissions" indicated by an instrument reading of less than 500 ppm above background levels." The EPA Method 21 would be the applicable test method for these facilities.

V. Administrative

The docket is an organized and complete file of all the information considered by EPA in the development of this rulemaking. The docket is a dynamic file, since material is added throughout the rulemaking development. The docketing system is intended to allow members of the public and industries involved to readily identify and locate documents so that they effectively participate in the rulemaking process. Along with the statement of basis and purpose of the proposed and promulgated standards and EPA responses to significant comments, the contents of the docket, except for interagency review materials, will serve as the record in case of judicial review [section 307(d)(7)(A)].

The effective date of this regulation is November 23, 1988. Section 111 of the Clean Air Act provides that standards of performance or revisions thereof become effective upon promulgation and apply to affected facilities of which the construction or modification was commenced after the date of proposal, May 4, 1987.

As prescribed by section 111, the promulgation of these standards was preceded by the Administrator's

determination pursuant to 40 CFR 60.16 that fugitive sources of VOC emissions from petroleum refineries, including wastewater systems, contribute significantly to air pollution that may reasonably be anticipated to endanger public health or welfare (44 FR 49222, August 21, 1979, and as amended by 47 FR 31876, July 23, 1982). In accordance with section 117 of the Act, publication of these promulgated standards was preceded by consultation with appropriate advisory committees, independent experts and Federal departments and agencies.

This regulation will be reviewed 4 years from the date of promulgation as required by the Clean Air Act. This review will include an assessment of such factors as the need for integration with other programs, the existence of alternative methods, enforceability, improvements in emission control technology, and reporting requirements.

Section 317 of the Clean Air Act requires the Administrator to prepare an economic impact assessment for any new source standard of performance promulgated under section 111(b) of the Act. An economic impact assessment was prepared for this regulation and for other regulatory alternatives. All aspects of the assessment were considered in the formulation of the standards to ensure that cost was carefully considered in determining BDT. The economic impact assessment is included in the BID for the proposed standards.

Information collection requirements associated with this regulation (those included in 40 CFR Part 60, Subpart A and Subpart QQQ) have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.* and have been assigned OMB control number (2060-0172).

Public reporting burden for this collection of information is estimated to be 8,430 hours annually, with an average of 140 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

Under Executive Order 12291, EPA is required to judge whether a regulation is a "major rule" and therefore subject to the requirements of a regulatory impact analysis (RIA). The Agency has determined that this regulation would result in none of the adverse economic effects set forth in Section 1 of the Executive Order as grounds for finding a regulation to be a "major rule." The industry-wide annualized costs in the fifth year after the standards would go into effect would be about \$1.1 million, less than the \$100 million established as the first criterion for a major regulation in the Executive Order. The estimated price increase of less than 0.1 percent associated with the proposed standards would not be considered a "major increase in costs or prices" specified as the second criterion in the Executive Order. The economic analysis of the proposed standards' effect on the industry did not indicate any significant adverse effects on competition, investment, productivity, employment, innovation, or the ability of U.S. firms to compete with foreign firms (the third criterion in the Executive Order). The Agency has, therefore, concluded that this regulation is not a "major rule" under Executive Order 12291.

This regulation was submitted to OMB for review as required by Executive Order 12291. Any written comments from OMB to EPA and any EPA response to those comments are available for public inspection in Docket No. A-82-39, EPA's Central Docket Section, South Conference Center, Room 4, 401 M Street, SW., Washington, DC 20460.

The Regulatory Flexibility Act of 1980 requires the identification of potentially adverse impacts of Federal regulations upon small business entities. The Act specifically requires the completion of a Regulatory Flexibility Analysis in those instances where small business impacts are possible. Because these standards impose no adverse economic impacts, a Regulatory Flexibility Analysis has not been conducted.

Pursuant to the provisions of 5 U.S.C. 605(b), I hereby certify that this rule will not have a significant economic impact on a substantial number of small entities.

List of Subjects in 40 CFR Part 60

Air pollution control, Intergovernmental relations, Petroleum refining, Reporting and recordkeeping requirements.

Date: November 8, 1988.

Lee M. Thomas,
Administrator.

PART 60—AMENDED

For the reasons set forth in the preamble, 40 CFR Part 60 is amended as follows:

1. The authority citation for Part 60 continues to read as follows:

Authority: Secs. 101, 111, 114, 116, 301, Clean Air Act as amended (42 U.S.C. 7401, 7411, 7414, 7416, 7601).

2. By adding a new subpart as follows:

Subpart QQQ—Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems

Sec.

60.690 Applicability and designation of affected facility.

60.691 Definitions.

60.692-1 Standards: General.

60.692-2 Standards: Individual drain systems.

60.692-3 Standards: Oil-Water separators.

60.692-4 Standards: Aggregate facility.

60.692-5 Standards: Closed vent systems and control devices.

60.692-6 Standards: Delay of repair.

60.692-7 Standards: Delay of compliance.

60.693-1 Alternative standards for individual drain systems.

60.693-2 Alternative standards for oil-water separators.

60.694 Permission to use alternative means of emission limitation.

60.695 Monitoring of operations.

60.696 Performance test methods and procedures and compliance provisions.

60.697 Recordkeeping requirements.

60.698 Reporting requirements.

60.699 Delegation of authority.

Subpart QQQ—Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems

§ 60.690 Applicability and designation of affected facility.

(a)(1) The provisions of this subpart apply to affected facilities located in petroleum refineries for which construction, modification, or reconstruction is commenced after May 4, 1987.

(2) An individual drain system is a separate affected facility.

(3) An oil-water separator is a separate affected facility.

(4) An aggregate facility is a separate affected facility.

(b) Notwithstanding the provisions of 40 CFR 60.14(e)(2), the construction or installation of a new individual drain system shall constitute a modification to an affected facility described in § 60.690(a)(4). For purposes of this paragraph, a new individual drain

system shall be limited to all process drains and the first common junction box.

§ 60.691 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act or in Subpart A of 40 CFR Part 60, and the following terms shall have the specific meanings given them.

"Active service" means that a drain is receiving refinery wastewater from a process unit that will continuously maintain a water seal.

"Aggregate facility" means an individual drain system together with ancillary downstream sewer lines and oil-water separators, down to and including the secondary oil-water separator, as applicable.

"Catch basin" means an open basin which serves as a single collection point for stormwater runoff received directly from refinery surfaces and for refinery wastewater from process drains.

"Closed vent system" means a system that is not open to the atmosphere and is composed of piping, connections, and, if necessary, flow inducing devices that transport gas or vapor from an emission source to a control device.

"Completely closed drain system" means an individual drain system that is not open to the atmosphere and is equipped and operated with a closed vent system and control device complying with the requirements of § 60.692-5.

"Control device" means an enclosed combustion device, vapor recovery system or flare.

"Fixed roof" means a cover that is mounted to a tank or chamber in a stationary manner and which does not move with fluctuations in wastewater levels.

"Floating roof" means a pontoon-type or double-deck type cover that rests on the liquid surface.

"Gas-tight" means operated with no detectable emissions.

"Individual drain system" means all process drains connected to the first common downstream junction box. The term includes all such drains and common junction box, together with their associated sewer lines and other junction boxes, down to the receiving oil-water separator.

"Junction box" means a manhole or access point to a wastewater sewer system line.

"No detectable emissions" means less than 500 ppm above background levels, as measured by a detection instrument in accordance with Method 21 in Appendix A of 40 CFR Part 60.

"Non-contact cooling water system" means a once-through drain, collection and treatment system designed and operated for collecting cooling water which does not come into contact with hydrocarbons or oily wastewater and which is not recirculated through a cooling tower.

"Oil-water separator" means wastewater treatment equipment used to separate oil from water consisting of a separation tank, which also includes the forebay and other separator basins, skimmers, weirs, grit chambers, and sludge hoppers. Slop oil facilities, including tanks, are included in this term along with storage vessels and auxiliary equipment located between individual drain systems and the oil-water separator. This term does not include storage vessels or auxiliary equipment which do not come in contact with or store oily wastewater.

"Oily wastewater" means wastewater generated during the refinery process which contains oil, emulsified oil, or other hydrocarbons. Oily wastewater originates from a variety of refinery processes including cooling water, condensed stripping steam, tank draw-off, and contact process water.

"Petroleum" means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.

"Petroleum refinery" means any facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through the distillation of petroleum, or through the redistillation of petroleum, cracking, or reforming unfinished petroleum derivatives.

"Sewer line" means a lateral, trunk line, branch line, ditch, channel, or other conduit used to convey refinery wastewater to downstream components of a refinery wastewater treatment system. This term does not include buried, below-grade sewer lines.

"Slop oil" means the floating oil and solids that accumulate on the surface of an oil-water separator.

"Storage vessel" means any tank, reservoir, or container used for the storage of petroleum liquids, including oily wastewater.

"Stormwater sewer system" means a drain and collection system designed and operated for the sole purpose of collecting stormwater and which is segregated from the process wastewater collection system.

"Wastewater system" means any component, piece of equipment, or installation that receives, treats, or processes oily wastewater from petroleum refinery process units.

"Water seal controls" means a seal pot, p-leg trap, or other type of trap filled

with water that has a design capability to create a water barrier between the sewer and the atmosphere.

§ 60.692-1 Standards: General.

(a) Each owner or operator subject to the provisions of this subpart shall comply with the requirements of §§ 60.692-1 to 60.692-5 and with §§ 60.693-1 and 60.693-2, except during periods of startup, shutdown, or malfunction.

(b) Compliance with §§ 60.692-1 to 60.692-5 and with §§ 60.693-1 and 60.693-2 will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in § 60.696.

(c) Permission to use alternative means of emission limitation to meet the requirements of §§ 60.692-2 through 60.692-4 may be granted as provided in § 60.694.

(d)(1) Stormwater sewer systems are not subject to the requirements of this subpart.

(2) Ancillary equipment, which is physically separate from the wastewater system and does not come in contact with or store oily wastewater, is not subject to the requirements of this subpart.

(3) Non-contact cooling water systems are not subject to the requirements of this subpart.

(4) An owner or operator shall demonstrate compliance with the exclusions in paragraphs (d)(1), (d)(2), and (d)(3) of this section as provided in § 60.697 (h), (i), and (j).

§ 60.692-2 Standards: Individual drain systems.

(a)(1) Each drain shall be equipped with water seal controls.

(2) Each drain in active service shall be checked by visual or physical inspection initially and monthly thereafter for indications of low water levels or other conditions that would reduce the effectiveness of the water seal controls.

(3) Except as provided in paragraph (a)(4) of this section, each drain out of active service shall be checked by visual or physical inspection initially and weekly thereafter for indications of low water levels or other problems that could result in VOC emissions.

(4) As an alternative to the requirements in paragraph (a)(3) of this section, if an owner or operator elects to install a tightly sealed cap or plug over a drain that is out of service, inspections shall be conducted initially and semiannually to ensure caps or plugs are in place and properly installed.

(5) Whenever low water levels or missing or improperly installed caps or plugs are identified, water shall be added or first efforts at repair shall be made as soon as practicable, but not later than 24 hours after detection, except as provided in § 60.692-6.

(b)(1) Junction boxes shall be equipped with a cover and may have an open vent pipe. The vent pipe shall be at least 90 cm (3 ft) in length and shall not exceed 10.2 cm (4 in) in diameter.

(2) Junction box covers shall have a tight seal around the edge and shall be kept in place at all times, except during inspection and maintenance.

(3) Junction boxes shall be visually inspected initially and semiannually thereafter to ensure that the cover is in place and to ensure that the cover has a tight seal around the edge.

(4) If a broken seal or gap is identified, first effort at repair shall be made as soon as practicable, but not later than 15 calendar days after the broken seal or gap is identified, except as provided in § 60.692-6.

(c)(1) Sewer lines shall not be open to the atmosphere and shall be covered or enclosed in a manner so as to have no visual gaps or cracks in joints, seals, or other emission interfaces.

(2) The portion of each unburied sewer line shall be visually inspected initially and semiannually thereafter for indication of cracks, gaps, or other problems that could result in VOC emissions.

(3) Whenever cracks, gaps, or other problems are detected, repairs shall be made as soon as practicable, but not later than 15 calendar days after identification, except as provided in § 60.692-6.

(d) Except as provided in paragraph (e) of this section, each modified or reconstructed individual drain system that has a catch basin in the existing configuration prior to May 4, 1987 shall be exempt from the provisions of this section.

(e) Refinery wastewater routed through new process drains and a new first common downstream junction box, either as part of a new individual drain system or an existing individual drain system, shall not be routed through a downstream catch basin.

§ 60.692-3 Standards: Oil-water separators.

(a) Each oil-water separator tank, slop oil tank, storage vessel, or other auxiliary equipment subject to the requirements of this subpart shall be equipped and operated with a fixed roof, which meets the following specifications, except as provided in

paragraph (d) of this section or in § 60.693-2.

(1) The fixed roof shall be installed to completely cover the separator tank, slop oil tank, storage vessel, or other auxiliary equipment with no separation between the roof and the wall.

(2) The vapor space under a fixed roof shall not be purged unless the vapor is directed to a control device.

(3) If the roof has access doors or openings, such doors or openings shall be gasketed, latched, and kept closed at all times during operation of the separator system, except during inspection and maintenance.

(4) Roof seals, access doors, and other openings shall be checked by visual inspection initially and semiannually thereafter to ensure that no cracks or gaps occur between the roof and wall and that access doors and other openings are closed and gasketed properly.

(5) When a broken seal or gasket or other problem is identified, first efforts at repair shall be made as soon as practicable, but not later than 15 calendar days after it is identified, except as provided in § 60.692-6.

(b) Each oil-water separator tank or auxiliary equipment with a design capacity to treat more than 16 liters per second (250 gpm) of refinery wastewater shall, in addition to the requirements in paragraph (a) of this section, be equipped and operated with a closed vent system and control device, which meet the requirements of § 60.692-5, except as provided in paragraph (c) of this section or in § 60.693-2.

(c)(1) Each modified or reconstructed oil-water separator tank with a maximum design capacity to treat less than 38 liters per second (600 gpm) of refinery wastewater which was equipped and operated with a fixed roof covering the entire separator tank or a portion of the separator tank prior to May 4, 1987 shall be exempt from the requirements of paragraph (b) of this section, but shall meet the requirements of paragraph (a) of this section, or may elect to comply with paragraph (c)(2) of this section.

(2) The owner or operator may elect to comply with the requirements of paragraph (a) of this section for the existing fixed roof covering a portion of the separator tank and comply with the requirements for floating roofs in § 60.693-2 for the remainder of the separator tank.

(d) Storage vessels, including slop oil tanks and other auxiliary tanks that are subject to the requirements of 40 CFR Subparts K, Ka, or Kb, are not subject to the requirements of this section.

(e) Slop oil from an oil-water separator tank and oily wastewater from slop oil handling equipment shall be collected, stored, transported, recycled, reused, or disposed of in an enclosed system. Once slop oil is returned to the process unit or is disposed of, it is no longer within the scope of this subpart. Equipment used in handling slop oil shall be equipped with a fixed roof meeting the requirements of paragraph (a) of this section.

(f) Each oil-water separator tank, slop oil tank, storage vessel, or other auxiliary equipment that is required to comply with paragraph (a) of this section, and not paragraph (b) of this section, may be equipped with a pressure control valve as necessary for proper system operation. The pressure control valve shall be set at the maximum pressure necessary for proper system operation, but such that the value will not vent continuously.

§ 60.692-4 Standards: Aggregate facility.

A new, modified, or reconstructed aggregate facility shall comply with the requirements of §§ 60.692-2 and 60.692-3.

§ 60.692-5 Standards: Closed vent systems and control devices.

(a) Enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816°C (1,500°F).

(b) Vapor recovery systems (for example, condensers and adsorbers) shall be designed and operated to recover the VOC emissions vented to them with an efficiency of 95 percent or greater.

(c) Flares used to comply with this subpart shall comply with the requirements of 40 CFR 60.18.

(d) Closed vent systems and control devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

(e)(1) Closed vent systems shall be designed and operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined during the initial and semiannual inspections by the methods specified in § 60.696.

(2) Closed vent systems shall be purged to direct vapor to the control device.

(3) A flow indicator shall be installed on a vent stream to a control device to ensure that the vapors are being routed to the device.

(4) All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place.

(5) When emissions from a closed system are detected, first efforts at repair to eliminate the emissions shall be made as soon as practicable, but not later than 30 calendar days from the date the emissions are detected, except as provided in § 60.692-6.

§ 60.692-6 Standards: Delay of repair.

(a) Delay of repair of facilities that are subject to the provisions of this subpart will be allowed if the repair is technically impossible without a complete or partial refinery or process unit shutdown.

(b) Repair of such equipment shall occur before the end of the next refinery or process unit shutdown.

§ 60.692-7 Standards: Delay of compliance.

(a) Delay of compliance of modified individual drain systems with ancillary downstream treatment components will be allowed if compliance with the provisions of this subpart cannot be achieved without a refinery or process unit shutdown.

(b) Installation of equipment necessary to comply with the provisions of this subpart shall occur no later than the next scheduled refinery or process unit shutdown.

§ 60.693-1 Alternative standards for individual drain systems.

(a) An owner or operator may elect to construct and operate a completely closed drain system.

(b) Each completely closed drain system shall be equipped and operated with a closed vent system and control device complying with the requirements of § 60.692-5.

(c) An owner or operator must notify the Administrator in the report required in 40 CFR 60.7 that the owner or operator has elected to construct and operate a completely closed drain system.

(d) If an owner or operator elects to comply with the provisions of this section, then the owner or operator does not need to comply with the provisions of §§ 60.692-2 or 60.694.

(e)(1) Sewer lines shall not be open to the atmosphere and shall be covered or enclosed in a manner so as to have no visual gaps or cracks in joints, seals, or other emission interfaces.

(2) The portion of each unburied sewer line shall be visually inspected initially and semiannually thereafter for indication of cracks, gaps, or other problems that could result in VOC emissions.

(3) Whenever cracks, gaps, or other problems are detected, repairs shall be made as soon as practicable, but not later than 15 calendar days after identification, except as provided in § 60.692-6.

§ 60.693-2 Alternative standards for oil-water separators.

(a) An owner or operator may elect to construct and operate a floating roof on an oil-water separator tank, slop oil tank, storage vessel, or other auxiliary equipment subject to the requirements of this subpart which meets the following specifications.

(1) Each floating roof shall be equipped with a closure device between the wall of the separator and the roof edge. The closure device is to consist of a primary seal and a secondary seal.

(i) The primary seal shall be a liquid-mounted seal.

(A) A liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the separator and the floating roof.

(B) The gap width between the primary seal and the separator wall shall not exceed 3.8 cm (1.5 in.) at any point.

(C) The total gap area between the primary seal and the separator wall shall not exceed 67 cm²/m (3.2 in.²/ft) of separator wall perimeter.

(ii) The secondary seal shall be above the primary seal and cover the annular space between the floating roof and the wall of the separator.

(A) The gap width between the secondary seal and the separator wall shall not exceed 1.3 cm (0.5 in.) at any point.

(B) The total gap area between the secondary seal and the separator wall shall not exceed 6.7 cm²/m (0.32 in.²/ft) of separator wall perimeter.

(iii) The maximum gap width and total gap area shall be determined by the methods and procedures specified in § 60.696(d).

(A) Measurement of primary seal gaps shall be performed within 60 calendar days after initial installation of the floating roof and introduction of refinery wastewater and once every 5 years thereafter.

(B) Measurement of secondary seal gaps shall be performed within 60 calendar days of initial introduction of refinery wastewater and once every year thereafter.

(iv) The owner or operator shall make necessary repairs within 30 calendar days of identification of seals not meeting the requirements listed in paragraphs (a)(1) (i) and (ii) of this section.

(2) Except as provided in paragraph (a)(4) of this section, each opening in the roof shall be equipped with a gasketed cover, seal, or lid, which shall be maintained in a closed position at all times, except during inspection and maintenance.

(3) The roof shall be floating on the liquid (i.e., off the roof supports) at all times except during abnormal conditions (i.e., low flow rate).

(4) The floating roof may be equipped with one or more emergency roof drains for removal of stormwater. Each emergency roof drain shall be fitted with a slotted membrane fabric cover that covers at least 90 percent of the drain opening area or a flexible fabric sleeve seal.

(5)(i) Access doors and other openings shall be visually inspected initially and semiannually thereafter to ensure that there is a tight fit around the edges and to identify other problems that could result in VOC emissions.

(ii) When a broken seal or gasket on an access door or other opening is identified, it shall be repaired as soon as practicable, but not later than 30 calendar days after it is identified, except as provided in § 60.692-6.

(b) An owner or operator must notify the Administrator in the report required by 40 CFR 60.7 that the owner or operator has elected to construct and operate a floating roof under paragraph (a) of this section.

(c) For portions of the oil-water separator tank where it is infeasible to construct and operate a floating roof, such as the skimmer mechanism and weirs, a fixed roof meeting the requirements of § 60.692-3(a) shall be installed.

(d) Except as provided in paragraph (c) of this section, if an owner or operator elects to comply with the provisions of this section, then the owner or operator does not need to comply with the provisions of §§ 60.692-3 or 60.694 applicable to the same facilities.

§ 60.694 Permission to use alternative means of emission limitation.

(a) If, in the Administrator's judgment, an alternative means of emission limitation will achieve a reduction in VOC emissions at least equivalent to the reduction in VOC emissions achieved by the applicable requirement in § 60.692, the Administrator will publish in the *Federal Register* a notice permitting the use of the alternative means for purposes of compliance with that requirement. The notice may condition the permission on requirements related to the operation

and maintenance of the alternative means.

(b) Any notice under paragraph (a) of this section shall be published only after notice and an opportunity for a hearing.

(c) Any person seeking permission under this section shall collect, verify, and submit to the Administrator information showing that the alternative means achieves equivalent emission reductions.

§ 60.695 Monitoring of operations.

(a) Each owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment, unless alternative monitoring procedures or requirements are approved for that facility by the Administrator.

(1) Where a thermal incinerator is used for VOC emission reduction, a temperature monitoring device equipped with a continuous recorder shall be used to measure the temperature of the gas stream in the combustion zone of the incinerator. The temperature monitoring device shall have an accuracy of 1 percent of the temperature being measured in °C or ± 0.5 °C (± 1.0 °F), whichever is greater.

(2) Where a catalytic incinerator is used for VOC emission reduction, temperature monitoring devices, each equipped with a continuous recorder shall be used to measure the temperature in the gas stream immediately before and after the catalyst bed of the incinerator. The temperature monitoring devices shall have an accuracy of 1 percent of the temperature being measured in °C or ± 0.5 °C (± 1.0 °F), whichever is greater.

(3) Where a carbon adsorber is used for VOC emissions reduction, a monitoring device that continuously indicates and records the VOC concentration level or reading of organics in the exhaust gases of the control device outlet gas stream or inlet and outlet gas stream shall be used.

(4) Where a flare is used for VOC emission reduction, the owner or operator shall comply with the monitoring requirements of 40 CFR 60.18(f)(2).

(b) Where a VOC recovery device other than a carbon adsorber is used to meet the requirements specified in § 60.692-5(a), the owner or operator shall provide to the Administrator information describing the operation of the control device and the process parameter(s) that would indicate proper operation and maintenance of the device. The Administrator may request further information and will specify

appropriate monitoring procedures or requirements.

(c) An alternative operational or process parameter may be monitored if it can be demonstrated that another parameter will ensure that the control device is operated in conformance with these standards and the control device's design specifications.

§ 60.696 Performance test methods and procedures and compliance provisions.

(a) Before using any equipment installed in compliance with the requirements of §§ 60.692-2, 60.692-3, 60.692-4, 60.692-5, or 60.693, the owner or operator shall inspect such equipment for indications of potential emissions, defects, or other problems that may cause the requirements of this subpart not to be met. Points of inspection shall include, but are not limited to, seals, flanges, joints, gaskets, hatches, caps, and plugs.

(b) The owner or operator of each source that is equipped with a closed vent system and control device as required in § 60.692-5 (other than a flare) is exempt from § 60.8 of the General Provisions and shall use Method 21 to measure the emission concentrations, using 500 ppm as the no detectable emission limit. The instrument shall be calibrated each day before using. The calibration gases shall be:

(1) Zero air (less than 10 ppm of hydrocarbon in air), and

(2) A mixture of either methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.

(c) The owner or operator shall conduct a performance test initially, and at other times as requested by the Administrator, using the test methods and procedures in § 60.18(f) to determine compliance of flares.

(d) After installing the control equipment required to meet § 60.693-2(a) or whenever sources that have ceased to treat refinery wastewater for a period of 1 year or more are placed back into service, the owner or operator shall determine compliance with the standards in § 60.693-2(a) as follows:

(1) The maximum gap widths and maximum gap areas between the primary seal and the separator wall and between the secondary seal and the separator wall shall be determined individually within 60 calendar days of the initial installation of the floating roof and introduction of refinery wastewater or 60 calendar days after the equipment is placed back into service using the following procedure when the separator is filled to the design operating level and

when the roof is floating off the roof supports.

(i) Measure seal gaps around the entire perimeter of the separator in each place where a 0.32 cm (0.125 in.) diameter uniform probe passes freely (without forcing or binding against seal) between the seal and the wall of the separator and measure the gap width and perimetrical distance of each such location.

(ii) The total surface area of each gap described in (d)(1)(i) of this section shall be determined by using probes of various widths to measure accurately the actual distance from the wall to the seal and multiplying each such width by its respective perimetrical distance.

(iii) Add the gap surface area of each gap location for the primary seal and the secondary seal individually, divide the sum for each seal by the nominal perimeter of the separator basin and compare each to the maximum gap area as specified in § 60.693-2.

(2) The gap widths and total gap area shall be determined using the procedure in paragraph (d)(1) of this section according to the following frequency:

(i) For primary seals, once every 5 years.

(ii) For secondary seals, once every year.

§ 60.697 Recordkeeping requirements.

(a) Each owner or operator of a facility subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section. All records shall be retained for a period of 2 years after being recorded unless otherwise noted.

(b)(1) For individual drain systems subject to § 60.692-2, the location, date, and corrective action shall be recorded for each drain when the water seal is dry or otherwise breached, when a drain cap or plug is missing or improperly installed, or other problem is identified that could result in VOC emissions, as determined during the initial and periodic visual or physical inspection.

(2) For junction boxes subject to § 60.692-2, the location, date, and corrective action shall be recorded for inspections required by § 60.692-2(b) when a broken seal, gap, or other problem is identified that could result in VOC emissions.

(3) For sewer lines subject to §§ 60.692-2 and 60.693-1(e), the location, date, and corrective action shall be recorded for inspections required by §§ 60.692-2(c) and 60.693-1(e) when a problem is identified that could result in VOC emissions.

(c) For oil-water separators subject to § 60.692-3, the location, date, and

corrective action shall be recorded for inspections required by § 60.692-3(a) when a problem is identified that could result in VOC emissions.

(d) For closed vent systems subject to § 60.692-5 and completely closed drain systems subject to § 60.693-1, the location, date, and corrective action shall be recorded for inspections required by § 60.692-5(e) during which detectable emissions are measured or a problem is identified that could result in VOC emissions.

(e)(1) If an emission point cannot be repaired or corrected without a process unit shutdown, the expected date of a successful repair shall be recorded.

(2) The reason for the delay as specified in § 60.692-6 shall be recorded if an emission point or equipment problem is not repaired or corrected in the specified amount of time.

(3) The signature of the owner or operator (or designee) whose decision it was that repair could not be effected without refinery or process shutdown shall be recorded.

(4) The date of successful repair or corrective action shall be recorded.

(f)(1) A copy of the design specifications for all equipment used to comply with the provisions of this subpart shall be kept for the life of the source in a readily accessible location.

(2) The following information pertaining to the design specifications shall be kept.

(i) Detailed schematics, and piping and instrumentation diagrams.

(ii) The dates and descriptions of any changes in the design specifications.

(3) The following information pertaining to the operation and maintenance of closed drain systems and closed vent systems shall be kept in a readily accessible location.

(i) Documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions shall be kept for the life of the facility. This documentation is to include a general description of the gas streams that enter the control device, including flow and VOC content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816°C (1,500°F) is used to meet the 95-percent requirement, documentation that those conditions exist is sufficient to meet the requirements of this paragraph.

(ii) A description of the operating parameter (or parameters) to be monitored to ensure that the control device will be operated in conformance

with these standards and the control device's design specifications and an explanation of the criteria used for selection of that parameter (or parameters) shall be kept for the life of the facility.

(iii) Periods when the closed vent systems and control devices required in § 60.692 are not operated as designed, including periods when a flare pilot does not have a flame shall be recorded and kept for 2 years after the information is recorded.

(iv) Dates of startup and shutdown of the closed vent system and control devices required in § 60.692 shall be recorded and kept for 2 years after the information is recorded.

(v) The dates of each measurement of detectable emissions required in §§ 60.692, 60.693, or 60.692-5 shall be recorded and kept for 2 years after the information is recorded.

(vi) The background level measured during each detectable emissions measurement shall be recorded and kept for 2 years after the information is recorded.

(vii) The maximum instrument reading measured during each detectable emission measurement shall be recorded and kept for 2 years after the information is recorded.

(viii) Each owner or operator of an affected facility that uses a thermal incinerator shall maintain continuous records of the temperature of the gas stream in the combustion zone of the incinerator and records of all 3-hour periods of operation during which the average temperature of the gas stream in the combustion zone is more than 28°C (50°F) below the design combustion zone temperature, and shall keep such records for 2 years after the information is recorded.

(ix) Each owner or operator of an affected facility that uses a catalytic incinerator shall maintain continuous records of the temperature of the gas stream both upstream and downstream of the catalyst bed of the incinerator, records of all 3-hour periods of operation during which the average temperature measured before the catalyst bed is more than 28°C (50°F) below the design gas stream temperature, and records of all 3-hour periods during which the average temperature difference across the catalyst bed is less than 80 percent of the design temperature difference, and shall keep such records for 2 years after the information is recorded.

(x) Each owner or operator of an affected facility that uses a carbon adsorber shall maintain continuous records of the VOC concentration level or reading of organics of the control

device outlet gas stream or inlet and outlet gas stream and records of all 3-hour periods of operation during which the average VOC concentration level or reading of organics in the exhaust gases, or inlet and outlet gas stream, is more than 20 percent greater than the design exhaust gas concentration level, and shall keep such records for 2 years after the information is recorded.

(g) If an owner or operator elects to install a tightly sealed cap or plug over a drain that is out of active service, the owner or operator shall keep for the life of a facility in a readily accessible location, plans or specifications which indicate the location of such drains.

(h) For stormwater sewer systems subject to the exclusion in § 60.692-1(d)(1), an owner or operator shall keep for the life of the facility in a readily accessible location, plans or specifications which demonstrate that no wastewater from any process units or equipment is directly discharged to the stormwater sewer system.

(i) For ancillary equipment subject to the exclusion in § 60.692-1(d)(2), an owner or operator shall keep for the life of a facility in a readily accessible location, plans or specifications which demonstrate that the ancillary equipment does not come in contact with or store oily wastewater.

(j) For non-contact cooling water systems subject to the exclusion in § 60.692-1(d)(3), an owner or operator shall keep for the life of the facility in a readily accessible location, plans or specifications which demonstrate that the cooling water does not contact hydrocarbons or oily wastewater and is not recirculated through a cooling tower.

(Approved by the Office of Management and Budget under control number 2060-0172)

§ 60.699 Reporting requirements.

(a) An owner or operator electing to comply with the provisions of § 60.693 shall notify the Administrator of the alternative standard selected in the report required in § 60.7.

(b)(1) Each owner or operator of a facility subject to this subpart shall submit to the Administrator within 60 days after initial startup a certification that the equipment necessary to comply with these standards has been installed and that the required initial inspections or tests of process drains, sewer lines, junction boxes, oil-water separators, and closed vent systems and control devices have been carried out in accordance with these standards. Thereafter, the owner or operator shall submit to the Administrator semiannually a certification that all of

the required inspections have been carried out in accordance with these standards.

(2) Each owner or operator of an affected facility that uses a flare shall submit to the Administrator within 60 days after initial startup, as required under § 60.8(a), a report of the results of the performance test required in § 60.696(c).

(c) A report that summarizes all inspections when a water seal was dry or otherwise breached, when a drain cap or plug was missing or improperly installed, or when cracks, gaps, or other problems were identified that could result in VOC emissions, including information about the repairs or corrective action taken, shall be submitted initially and semiannually thereafter to the Administrator.

(d) As applicable, a report shall be submitted semiannually to the Administrator that indicates:

(1) Each 3-hour period of operation during which the average temperature of the gas stream in the combustion zone of a thermal incinerator, as measured by

the temperature monitoring device, is more than 28 °C (50 °F) below the design combustion zone temperature,

(2) Each 3-hour period of operation during which the average temperature of the gas stream immediately before the catalyst bed of a catalytic incinerator, as measured by the temperature monitoring device, is more than 28°C (50°F) below the design gas stream temperature, and any 3-hour period during which the average temperature difference across the catalyst bed (i.e., the difference between the temperatures of the gas stream immediately before and after the catalyst bed), as measured by the temperature monitoring device, is less than 80 percent of the design temperature difference, or,

(3) Each 3-hour period of operation during which the average VOC concentration level or reading of organics in the exhaust gases from a carbon adsorber is more than 20 percent greater than the design exhaust gas concentration level or reading.

(e) If compliance with the provisions of this subpart is delayed pursuant to

§ 60.692-7, the notification required under 40 CFR 60.7(a)(4) shall include the estimated date of the next scheduled refinery or process unit shutdown after the date of notification and the reason why compliance with the standards is technically impossible without a refinery or process unit shutdown.

(Approved by the Office of Management and Budget under control number 2060-0172)

§ 60.699 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States:

§ 60.694 Permission to use alternative means of emission limitations.

[FR Doc. 88-26939 Filed 11-22-88; 8:45 am]

BILLING CODE 5560-50-M

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Estimate Report

Wednesday
November 23, 1988

Part III

Environmental Protection Agency

40 CFR Parts 122 and 403

**EPA Administered Permit Programs; the
National Pollutant Discharge Elimination
System; General Pretreatment
Regulations for Existing and New
Sources; Proposals To Implement the
Recommendations of the Domestic
Sewage Study; Proposed Rule**

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 122 and 403

[EN-FRL-3309-6]

EPA Administered Permit Programs, The National Pollutant Discharge Elimination System; General Pretreatment Regulations for Existing and New Sources, Proposals to Implement the Recommendations of the Domestic Sewage Study.

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) today is proposing to amend the General Pretreatment and the National Pollutant Discharge Elimination System regulations (40 CFR Parts 122 and 403) to implement section 3018(b) of the Resource Conservation and Recovery Act (RCRA) and sections 207(b) and 402(b)(8) of the Clean Water Act (CWA). The proposed regulations are intended to carry out the recommendations of the Domestic Sewage Study (hereinafter referred to as "the Study").

EPA submitted the Study to Congress in response to section 3018(a) of RCRA. This provision directed the Agency to prepare a report for Congress on wastes discharged through sewer systems to publicly owned treatment works (POTWs) that are exempt from regulation under RCRA as a result of the Domestic Sewage Exclusion. The Study examined the nature and sources of hazardous wastes discharged to POTWs, measured the effectiveness of EPA's programs in dealing with such discharges, and recommended ways to improve the programs to better control hazardous wastes entering POTWs.

To implement the recommendations to the Study, section 3018(b) of RCRA directs the Administrator to revise existing regulations and promulgate such additional regulations as are necessary to assure the hazardous wastes discharged to POTWs are adequately controlled to protect human health and the environment. Today's proposed changes to the general pretreatment regulations are a step towards that goal. POTWs should note that parts of today's proposal apply to all POTWs, whether or not they have an approved pretreatment program.

DATE: Comments must be received on or before January 23, 1989.

ADDRESS: Comments should be addressed to Marilyn Goode, Permits Division (EN-336), Environmental

Protection Agency, 401 M Street SW., Washington DC 20460.

FOR FURTHER INFORMATION CONTACT: Marilyn Goode, Permits Division (EN-336), Environmental Protection Agency, 401 M Street SW., Washington, DC 20460 (202-475-9533). The record for this rulemaking is available at Room 208 Northeast Mall at the above address.

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I. Background

The regulatory amendments proposed today originated in the Domestic Sewage Exclusion. The exclusion, established by Congress in section 1004(27) of RCRA, provides that solid or dissolved material in domestic sewage is not solid waste as defined in RCRA. A corollary is that such material cannot be

considered a hazardous waste for purposes of RCRA.

The regulatory exclusion applies to domestic sewage as well as mixtures of domestic sewage and other wastes that pass through the sewer system to a POTW (see 40 CFR 261.4(a)(1)). The exclusion thus covers industrial wastes discharged to POTW sewers which contain domestic sewage, even if these wastes would be considered hazardous if disposed of by other means.

One effect of the exclusion is that industrial facilities which generate hazardous wastes and discharge such wastes to sewers containing domestic sewage are not subject to RCRA manifest requirements for the transport of those excluded wastes. However, such industrial users must comply with certain other RCRA requirements that apply to generators of hazardous wastes. Some of these requirements are set forth at 40 CFR 262.11 (determining whether a waste is hazardous), § 262.12 (obtaining an EPA identification number), § 262.34 (accumulation of hazardous wastes), § 262.40 (c) and (d) (recordkeeping), and § 262.43 (reporting). Other requirements may apply if the wastes are treated or stored prior to discharge.

Another effect of the Domestic Sewage Exclusion is that POTWs receiving mixtures of hazardous waste and domestic sewage through the sewer system are not deemed to have received hazardous wastes. Therefore, such POTWs are not required to meet the RCRA requirements of 40 CFR Part 264 for treating, storing, and disposing of these wastes. However, hazardous wastes delivered directly to a POTW by truck, rail, or dedicated pipe are not covered by the Domestic Sewage Exclusion. POTWs receiving these wastes are subject to regulation under the RCRA permit-by-rule (see 40 CFR 270.60(c)).

In 1984, Congress enacted the Hazardous and Solid Waste Amendments to RCRA. The legislative history of these amendments demonstrates that Congress wanted EPA to examine the effects of the Domestic Sewage Exclusion. To this end, section 3018(a) of the Hazardous and Solid Waste Amendments to RCRA required EPA to prepare:

*** a report to Congress concerning those substances identified or listed under section 3001 which are not regulated under this subtitle by reason of the exclusion for mixtures of domestic sewage and other wastes that pass through a sewer system to a publicly owned treatment works. Such report shall include the types, size, and number of generators which dispose of substances in

this manner, and the identification of significant generators, wastes, and waste constituents not regulated under existing Federal law or regulated in a manner sufficient to protect human health and the environment.

EPA submitted its report (the Study) to Congress on February 7, 1986. In performing the study, the Agency reviewed information on 160,000 waste dischargers from 47 industrial categories and the residential sector. Because of the nature of the available data sources, the Study provided estimates for the discharge of the specific constituents of hazardous wastes (e.g., benzene, acetone, etc.) rather than estimates for hazardous wastes as they are more generally defined under RCRA (i.e., "characteristic" wastes such as ignitable or reactive wastes, or listed wastes such as spent solvents, electroplating baths, etc.). The Study also provided more extensive estimates for those hazardous constituents which are also CWA priority pollutants. The CWA priority pollutant list was originally developed as part of a settlement agreement between the Natural Resources Defense Council (NRDC) and EPA (*NRDC v. Train*, 8 ERC 2120 (D.D.C. 1976)). This agreement required the agency to promulgate technology-based standards for 65 compounds or classes of compounds. Congress then incorporated this list of toxic pollutants as part of the 1977 amendments to the CWA. From the list of compounds or classes of compounds, EPA later developed a list of 126 individual priority pollutants.

EPA was able to give estimates in the Study on the types, sources, and quantities of many hazardous constituents discharged to POTWs. The Study provided information on industrial categories ranging from large hazardous waste generators (such as the organic chemicals industry) to the smaller generators (such as laundries and motor vehicle services). The Study also examined the fate of hazardous constituents once they are discharged to POTW collection and treatment systems and discussed the potential for environmental effects resulting from the discharge of these constituents after treatment by POTWs. The Study then measured the effectiveness of existing government controls in dealing with these discharges, particularly federal and local pretreatment programs and categorical pretreatment standards applicable to industrial users of POTWs.

After considering all the pertinent data, EPA concluded that the Domestic Sewage Exclusion should be retained at the present time. The Study found that CWA authorities are generally the best way to control hazardous waste

discharges to POTWs. However, the Study also found that these authorities should be employed more broadly and effectively to regulate these discharges. The Study therefore recommended ways to improve various EPA programs under the CWA to obtain better control of hazardous wastes entering POTWs.

The legislative history of Section 3018 of RCRA displays Congress' understanding that the appropriateness of the Domestic Sewage Exclusion depends largely on an effective pretreatment program under the CWA. The pretreatment program (mandated by sections 307(b) and 402(b)(8) of the CWA and implemented in 40 CFR Part 403) provides that industrial users must pretreat pollutants discharged to POTWs to prevent the pollutants from interfering with or passing through POTWs.

As a follow-up to the Domestic Sewage Study, section 3018(b) of RCRA requires the Administrator to revise existing regulations and to promulgate such additional regulations as are necessary to ensure that hazardous wastes discharged to POTWs are adequately controlled to protect human health and the environment. These regulations are to be promulgated pursuant to Subtitle C of RCRA or any other authority of the Administrator, including section 307 of the CWA. As a first step towards promulgating the regulations called for by section 3018(b), the Agency published an Advance Notice of Proposed Rulemaking (ANPR) in the *Federal Register* on August 22, 1986 (51 FR 30166). In the ANPR, EPA made preliminary suggestions for regulatory changes, which, if promulgated, would improve the control of hazardous wastes discharged to POTWs. Secondly, the Agency also held three public meetings in Washington, DC, Chicago, and San Francisco to solicit additional comments on the ANPR. Finally, EPA met with several interested groups and organizations to obtain the benefit of their advice and expertise.

The comments received on the ANPR were summarized and discussed in a *Federal Register* notice published on June 22, 1987 (52 FR 23477). That notice also described all the activities which EPA is carrying out to fulfill the recommendations of the Study. Most commenters suggested ways to make the pretreatment program more effective in controlling hazardous wastes discharged to municipal wastewater treatment plants.

Today's notice proposes changes to the general pretreatment regulations in response to the findings and recommendations of the Study (for a

summary of these findings and recommendations, see Chapter 7 of the Study). Today's proposal reflects EPA's response to the Congressional mandate of section 3018(b), its consideration of comments received on the ANPR, and its accumulated experience in shaping and overseeing the national pretreatment program. The amendments proposed today are more specific than the ideas presented in earlier notices. Consequently, commenters may wish to supplement earlier comments. The Agency solicits comments on all aspects of the amendments proposed today.

II. Proposed Changes

A. Specific Discharge Prohibitions

As part of its review of the national pretreatment program, the Study recommended modifying the prohibited discharge standards of the general pretreatment regulations to improve control of characteristic hazardous wastes and solvents.

The specific prohibitions forbid discharging certain types of materials which harm POTW systems by creating fire hazards, causing corrosion, obstructing flow, or creating heat which inhibits biological activity (see 40 CFR 403.5(b)). The Study and the ANPR discussed expanding these prohibitions to forbid the discharge of characteristic hazardous wastes under RCRA (i.e., wastes that are defined as hazardous under 40 CFR Part 261, Subpart C if they possess certain characteristics). These characteristics are ignitability, corrosivity, reactivity, and toxicity measured by the Extraction Procedure (EP) or Toxicity Characteristic Leaching Procedure (TCLP).

The majority of commenters who discussed this suggestion said that a blanket prohibition of characteristic RCRA hazardous wastes to POTWs would be inappropriate. These commenters stated that materials exhibiting these characteristics often lose their hazardous qualities when they are mixed with domestic sewage or treated at a POTW. The fact that a particular substance exhibits a RCRA hazardous waste characteristic does not necessarily indicate the likelihood of pass through or interference, these commenters believed, especially in the case of toxicity (EP or TCLP).

Other commenters supported adding these characteristics to the specific discharge prohibitions. These commenters often advocated modifying the characteristics to make them more relevant to conditions in POTW collection and treatment systems.

After considering this issue, the Agency has concluded that adding all the RCRA characteristics to the specific discharge prohibitions would not be appropriate, since substances exhibiting these characteristics do not necessarily pass through or interfere with POTW. However, EPA agrees with the commenters who stated that the current prohibitions could be improved by adopting into 40 CFR 403.5(b) certain RCRA characteristics in modified form. Following is a discussion of the Agency's proposed modifications.

1. Ignitability and Explosivity

The indirect discharge of ignitable materials has caused many documented cases of explosions and fires in POTW collection systems. The severity of these incidents ranges from narrowly averted fires to actual explosions which have killed POTW workers and destroyed the collection system and surrounding area.

These fires and explosions often happen near the point of indirect discharge. Temperatures in the collection system which are above the ambient temperature may promote evaporation of ignitable wastes and lead to fires and explosions. In addition, collection systems are generally closed to the atmosphere except at certain points such as manhole lids or storm drains. Thus, ignitable wastes within the collection system continually evaporate into a relatively fixed volume of air, readily forming vapors which cannot be dispersed to the open atmosphere.

Once these vapors are formed, the sources of ignition can include electric sparks from motors or generators, frictional heat, cigarettes, hot surfaces such as a manhole lid heated by the sun, or chemical heat generated by reactions occurring at the point of discharge. Explosions in POTW systems can damage the sewer, pumping stations, and (if the sewer caves in because of an explosion) roads and buildings above the sewer. POTW workers may suffer injuries from the force of an explosion, from burns, or from smoke inhalation, thus interfering with effective operation of the system. Finally, all fires or explosions will to some extent hinder the operation of the POTW by requiring the affected trunk line to be closed off during firefighting or later repairs.

The present specific prohibitions already forbid the discharge to sewers of materials creating a fire or explosion hazard. However, this narrative provision lacks specificity; it does not give industrial users or POTWs specific methods or limits to determine whether a wastewater discharge violates the prohibition. As a result, the prohibition has limited effectiveness as a preventive requirement. The standard is clearly violated only if there is an actual fire or

explosion in the sewer, if an industrial user violates a local limit designed to implement 40 CFR 403.5 (a) and (b). The best way to prevent the discharge of ignitable pollutants (or mixtures) is to test or monitor the discharge for the characteristics of ignitability or explosivity. However, the current prohibition does not require any such testing or monitoring.

To address this problem, the Agency is today proposing to amend 403.5(b) to forbid discharges with a closed cup flashpoint of less than 140° Fahrenheit (the RCRA standard for ignitable liquid waste under 40 CFR 261.21(a)(1)).

A flashpoint is the minimum temperature at which vapor combustion will spread away from its source of ignition. Below this temperature, combustion of the vapor immediately above the liquid will either not occur at all, or will occur only at the point of ignition. Temperatures above this flashpoint are needed for combustion to spread. Thus, a flashpoint limitation would ensure that no discharge to a POTW will independently cause the propagation of self-sustained combustion.

EPA chose the flashpoint of 140 degrees Fahrenheit as the RCRA standard for liquid ignitable wastes because typical industrial wastes are capable of being subjected to this temperature during routine management (studies indicated that this temperature can be reached in storage tanks during hot weather.) Typical industrial wastewater temperatures are considerably below 140 degrees Fahrenheit. In addition, ambient temperatures are not likely to meet or exceed this temperature, either at the point of discharge or in the sewer. For this reason, the Agency believes that the 140 degree flashpoint would also be an appropriate addition to the specific discharge prohibitions.

Although the 140 degree prohibition would be imposed upon wastewater discharges and not wastewater constituents, comparing the flashpoints of typical organic wastewater constituents provides a rough guide to the stringency of the flashpoint prohibition. In general, wastewater discharges would have to be at least as nonflammable as furfural or benzaldehyde to meet the flashpoint prohibition. The prohibition would not permit the undiluted discharge of volatiles such as benzene or ethyl alcohol.

The most appropriate way to test the flashpoint of wastewaters is a closed cup measure. The closed cup method most closely duplicates the collection of vapor in closed spaces such as sewers. For this reason, the Agency is proposing

to prohibit discharges with a closed cup flashpoint of less than 140 degrees F. Closed cup testers are commonly used and are available from laboratory supply firms. The closed cup tests specified under RCRA and proposed to be required today are the Pensky-Martin closed cup tester and the Setaflash closed cup tester, using standard test methods specified in 40 CFR 261.21(a)(1). Not all industrial users will find it necessary to use such testers. Many will be able to determine the flashpoint of substances they discharge by using reference tables or other sources of information.

The Agency emphasizes that the proposed flashpoint prohibition applies to each industrial user's discharge independently. The prohibition will not necessarily address the flammability of discharges from multiple industrial users that are combined in sewers. Because of the effect of dilution in the sewer system, however, it seems reasonable to assume that the concentrations of combustible constituents in sewer wastewaters will usually be well below the concentrations required for flammability if all industrial users comply with the flashpoint prohibition. In addition, EPA believes imposing a uniform criterion on industrial discharges would make POTW implementation and enforcement easier in some cases, since the flashpoint prohibition effectively prohibits the discharge of certain highly flammable substances in pure or concentrated form. For these substances, enforcement of the specific prohibition would be particularly easy because of the availability in technical literature of values for pure compounds.

EPA solicits comments on whether its proposed flashpoint prohibition is reasonable, unduly stringent, or insufficiently protective of POTWs under worst case conditions. Specifically, the Agency requests comments on whether such a prohibition would sufficiently take into account the effects (harmful or beneficial) of effluent mixing or dilution in a POTW system, and on whether there exists another technically feasible alternative that would take these effects into account while still being preventive.

It should be noted that an aqueous solution containing less than twenty-four percent alcohol by volume is not considered to be an ignitable waste under 40 CFR 261.21(a)(1). Because these substances may be discharged to POTW's in considerable quantities and they may wish to conduct appropriate monitoring, EPA is not proposing to exempt these liquids from its proposed prohibition of the discharge of pollutants

with a flashpoint of less than 140 ° Fahrenheit. However, the Agency solicits comment on whether the possibility of damage to POTWs from such substances is so slight that such an exemption would be appropriate.

In order to deal with the problems of mixing and dilution in the sewer, EPA evaluated various other prohibitions which would take these factors into account. The most practical option appears to be one which is already used by some POTWs. This is a prohibition based on the lower explosion limit (LEL) of an organic vapor mixture. The LEL of an organic vapor is the minimum concentration required to form a flammable or explosive vapor to air mixture. Under this procedure, the POTW measures the flammability or explosivity of an organic vapor in the sewer as a percent of the mixture's LEL, using an explosimeter. The POTW then identifies and quantifies (through vapor phase monitoring) the specific compounds responsible for an LEL exceedance registered on the explosimeter. The POTW may subsequently require certain industrial users to install gas monitoring equipment as appropriate. Many POTW technicians already use explosimeters to detect combustible vapors in sewers. In addition, many standard design requirements for oxygen activated sludge plants use LEL warning systems to prevent explosions in the recycled oxygen gas in the reactors. The warning system triggers an automatic shutdown of oxygen addition to the plant at some organic content below the LEL, as well as a flushing of the organic oxygen mixture from the reactor.

EPA is today proposing to amend 40 CFR 403.5(b) to provide that no discharge to the POTW shall result in an exceedance of ten percent of the LEL at any point within the POTW (including, e.g., the collection system). The Agency believes that this prohibition, used in combination with the flashpoint approach, could be very effective in preventing fires and explosions. The flashpoint prohibition is less expensive and easier to execute, but it is applied to the effluent before mixing in the sewer. The LEL measurements, on the other hand, are more costly and difficult to perform but are more effective in determining the explosivity of effluent mixtures under actual conditions in the sewer.

The effectiveness of either of these prohibitions depends largely on monitoring. The flashpoint test is perhaps more appropriate as an inexpensive way to monitor smaller dischargers who might occasionally

discharge ignitable wastes, and hazardous waste haulers. It is a simple test that quickly identifies highly flammable substances and mixtures. LEL monitoring may be more useful when applied to significant dischargers who frequently or routinely discharge these substances, since large or frequent discharges would better justify the installation of continuous explosivity monitoring equipment that warns when a specified percentage of the LEL is reached. POTWs may also require industrial users to take other measure to prevent violations of the LEL prohibition, such as modifying their discharge practices.

The Agency solicits comments on whether the LEL prohibition is practical, either alone or in combination with the flashpoint prohibition. Specifically, EPA requests comments on whether it might be too difficult to link an LEL exceedance within the sewer system to discharges from specific industrial users, or whether the vapor phase monitoring needed to determine the causes of the exceedance would be too difficult or expensive. The Agency also requests comment on whether the flashpoint approach or the LEL approach would be sufficient alone to prevent fires and explosions at POTWs.

2. Reactivity and Fume Toxicity

Wastes exhibiting the reactivity characteristic are regulated under RCRA because their extreme instability and tendency to react violently or explode make them a hazard to human health and the environment at all stages of waste management. In general, RCRA defines as reactive any waste which is an explosion hazard, generates harmful quantities of toxic gas or vapor when mixed with water, or reacts violently without detonation with water to generate elevated pressures and/or heat. EPA chose to adopt a narrative standard for reactive wastes because the varied effects and physical properties associated with these wastes are not easily quantifiable or measurable by standardized testing protocols.

Many commenters on the ANPR were concerned about the health and safety of workers at POTWs. There is no question that the generation of toxic gases and vapors can sometimes be dangerous to the safety and health of these workers, thus interfering with operations at the POTW and even endangering human life. In addition, the local general population could also suffer if sufficient quantities of toxic gases and vapors are released from sewer vents or aeration or containment basins.

Gases and vapors may be caused by chemical reactions between constituents of the industrial discharge and the receiving sewage, or microbial metabolism. In addition, some toxic gases can be generated as the result of sudden drops in pH. Besides generating toxic gases and vapors when mixed with sewage, industrial discharges may have sufficiently high concentration of toxic gases and volatile liquids to cause toxic levels of gas or vapor to form above the wastewater even if the discharge is diluted by the sewage. Sewer workers (and, in one instance, nearby residents) have been killed by inhaling hydrogen sulfide gas formed by the reaction of spilled substances with organic material in sludge or other materials.

Many of the existing specific discharge prohibitions will help prevent harm to POTW workers. Such harm, besides clearly constituting interference with POTW operations, is a serious concern for workers and operators at POTWs, as was expressed in the comments received in response to the ANPR. However EPA has never explicitly required POTWs to develop local limits to prevent this kind of interference. To address this question, the Agency is today proposing to amend 40 CFR 403.5(b) to provide that no discharge to the POTW shall result in toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems. EPA is also proposing to amend 40 CFR 403.5(c) to require POTWs to implement this prohibition by establishing numerical discharge limits or other controls where necessary based on existing human toxicity criteria or other information. Industrial users would then be liable for any violations of these limits or controls.

The American Conference of Government Industrial Hygienists (ACGIH) annually publishes a list of threshold limit values (TLVs) for numerous toxic inorganic and organic chemicals. The threshold limit values represent estimated chemical concentrations in air below which harmful health effects in exposed populations are believed to be unlikely to occur. For each chemical listed, one or more types of threshold limits are listed. The three types of threshold limits are: (1) A concentration on which nearly all workers may be exposed day after day without adverse effects; (2) a concentration to which workers may be exposed continuously for a short period of time without suffering irritation, chronic tissue damage, or drowsiness sufficient to impair self-rescue or work

efficiency; and (3) a concentration that should not be exceeded during any part of the work day. If any one of these three threshold limits is exceeded, a potential hazard from that substance is presumed to exist.

Another approach used to control the health impacts of breathing volatile organic compounds has been developed by the Metropolitan Sewer District of Cincinnati. This approach features the use of a vapor headspace gas chromatographic analysis of equilibrated industrial wastewater discharge (one volume of wastewater to one volume of air head space) at room temperature (24 °C). The analysis procedure measures the total vapor space organic concentration by calculating the total peak area of the chromatogram expressed as parts per million (ppm) of equivalent hexane. It is not necessary to identify individual peaks. A 300 ppm equivalent hexane concentration was selected as a pragmatic local limit to minimize exposure hazards, since, although sewer workers should always use appropriate breathing devices, the 300 ppm limit minimizes the risk from accidental exposures. It reduces the likelihood that volatile organic levels in the sewer air space would exceed levels considered immediately dangerous to life and health.

A limitation of the 300 ppm equivalent hexane limit is that it does not ensure that the levels of individual volatiles will be below safe exposure levels. However, it should prevent concentrations of total volatiles from exceeding immediately dangerous levels, and would also eliminate many explosive or flammable hazards (except for spills or illegal discharges). Monitoring is done by a laboratory test that can be run by many wastewater treatment laboratories.

It should be noted that neither the Cincinnati approach nor the ACGIH criteria are designed to protect workers against long-term health effects from possible carcinogens, mutagens, and teratogens. However, EPA believes that this proposed amendment to the specific discharge prohibitions will help prevent the generation of quantities of toxic vapors at the POTW that are capable of causing acute health effects to POTW workers. In some cases the prohibitions could even prevent harm to the general public as well. POTWs may use such standards as those employed by the ACGIH and the Metropolitan Sewer District of Cincinnati to establish local limits or other criteria they find appropriate. These limits should give

POTWs an effective way to implement and enforce the proposed prohibition.

EPA solicits comments on the addition of this prohibition to the general pretreatment regulations and on the feasibility of developing local limits to other controls from human toxicity criteria or other information such as those discussed above. The Agency requests comments on the practicality of such a prohibition, on alternative regulatory ways to protect worker health and safety, and on whether worker health and safety is adequately protected by the present general and specific discharge prohibitions.

3. Used Oil

EPA also solicits comment on amending 40 CFR 403.5(b) to prohibit the discharge of used oil to POTWs. The Agency has become concerned about the possibility that the volume of used oil disposed of by this method is increasing to the point of causing interference and pass through.

"Used oil" is generally any oil that has been refined from crude oil, used, and, as a result of such use, contaminated by physical or chemical impurities. Used oils include spent automotive lubricating oils, transmission and brake fluid, spent industrial oils such as compressor, turbine, and bearing oils, hydraulic oils, metalworking, gear, electrical, and refrigerator oils, railroad drainings, and spent industrial process oils.

The likely increase in volume of used oil discharged to sewers is due to several factors, chief among them the Domestic Sewage Exclusion, the RCRA land ban, and lower prices for crude oil which make it no longer economically profitable to store used oil. The Agency estimates that four to eight million gallons of used oil per year are dumped into sewers. There are currently no specific prohibitions against disposing of used oil in sewers, although the existing prohibitions forbid the discharge of pollutants which obstruct flow at the POTW. Used oil is often stored in 500 gallon tanks and transported in 3000 gallon tank trucks. Release of these volumes of oil has the potential to interfere with operations at POTWs, particularly in the case of smaller plants.

In addition, used oil can contain a variety of toxic or hazardous constituents such as PCBs, benzene, chromium, arsenic, cadmium, and lead. Examination of the composition of used oil generated in the United States showed that average levels of twelve pollutants found in waste oil are above the reportable quantities established in 40 CFR 302.4(a) as hazardous levels of

these constituents under the Superfund Program. EPA has also conducted a study assessing the potential for pass through of these pollutants to surface waters and to sludge. Results showed that, when large volumes of used oil are discharged, there is a potential for pass through that can cause violations of water quality criteria (details of these analyses are contained in the record of this rulemaking). Many of the constituents in contaminated used oil, such as trichloroethylene and tetrachloroethylene, are highly water soluble and thus characterized by a high mobility potential. Metals such as arsenic, chromium, and lead are very persistent in the environment when released from the POTW in sludge or in wastewater effluent. Used oil is also an energy resource that might be better collected and recycled than discharged into POTWs.

For these reasons, the Agency requests comment on the possibility of amending 40 CFR 403.5(b) to forbid the discharge of used oil into POTWs. EPA solicits comments on the possible advantage and disadvantages of such a prohibition, and on which particular kinds of used oil should be prohibited.

4. Solvent Wastes

EPA also wishes to solicit comment on the possibility of amending the specific discharge prohibitions to prohibit the discharge of listed solvent hazardous wastes from non-specific sources as defined in 40 CFR 261.31 (EPA Hazardous Waste Nos. F001, F002, F003, F004, and F005).

These solvent listings (about 30 organic compounds) encompass spent solvents, spent solvent mixtures and still bottoms from the recovery of spent solvents and spent solvent mixtures. The compounds were listed on the basis of ignitability and/or toxicity. Less than one-half are currently designated as CWA priority pollutants.

Discharges of solvent wastes to POTWs have involved actual fires or explosions, or potential fires which caused evacuation of treatment plant buildings and unusual measures to protect treatment or collection systems (e.g., ventilation or flushing of sewer lines). The most frequent problem caused by solvent discharges is fume toxicity occasioned by volatilization in POTW collection and treatment systems. Many incidents have been documented involving worker illness, including nausea, shortness of breath, skin irritation, and headaches. Solvent discharges have also caused inhibition or upset of biological treatment systems in several instances, or interfered with

treatment plant operation in some other way. For example, in one case, the diversion of oxygen from an activated sludge treatment system due to the threat of fire or explosion resulted in a marked decrease in treatment plant efficiency.

In addition, the Agency has evidence that solvent discharges to POTWs may interfere with beneficial sludge management. Several sludges in sampling programs have approached TCLP failure due to concentration of solvents in leachate. Analysis of pollutant fate within POTW systems has shown that significant quantities of solvents pass through to receiving waters where biological treatment systems are not well acclimated to the pollutant in question. Moreover, pass through of solvent wastes will be substantially greater at POTWs operating at less than secondary treatment levels or experiencing major combined sewer overflow problems.

EPA solicits comments on the merits of amending the specific discharge prohibitions to forbid the discharge to POTWs of listed solvent wastes under 40 CFR 261.31 (EPA Hazardous Wastes Nos. F001, F002, F003, F004, and F005). Specifically, the Agency requests comment on whether existing local limits, the proposed amendments to the specific discharge prohibitions concerning ignitability and fume toxicity, and the proposed solvent management component of industrial user spill and batch control plans (see Part II-B below) would address most of the concerns discussed above, possibly making a ban on solvents redundant. A possible advantage of these proposed amendments is that they would address the discharge of organic compounds not used as solvents. This approach might be particularly useful in industries with significant loadings of non-volatile organic pollutants (e.g., pharmaceutical manufacturing, pesticides manufacturing, or other industries utilizing organics production or formulation processes). On the other hand, the RCRA listed solvent wastes include alcohols and ketones, which are very soluble in water, are often difficult to treat by physical or chemical treatment, and may be best treated by biological degradation processes such as those used at POTWs. The Agency solicits comment on whether the possible impacts of solvents on POTWs and receiving waters would justify prohibiting these wastes from being discharges to POTWs, and whether such a prohibition would be appropriate for those highly water-soluble solvent

wastes which are more appropriately treated by degradation.

B. Spills and Batch Discharges (Slugs)

Spills and batch discharges present special challenges to POTWs. As documented by data on incidents at POTWs, these discharges can cause many problems at the treatment plant, including worker illness, actual or threatened explosion, biological upset or inhibition, toxic fumes, corrosion, and contamination of sludge and receiving waters. A recent survey undertaken by the Association of Metropolitan Sewerage Agencies (AMSA) indicated that spills to sewer systems were the most common source of hazardous wastes at the respondents' treatment plants.

The current general pretreatment regulations do not address these problems comprehensively. The principal pretreatment regulation concerning slugs is the requirement that all industrial users notify POTWs of slug loads of pollutant discharges that, because of flow rate or concentration, will interfere with the POTW (40 CFR 403.12(f)). On October 17, 1988 (53 FR 40562) EPA expanded this requirement to include notification of slug loads that would violate any of the specific prohibitions of 40 CFR 403.5(b).

In the ANPR, the Agency discussed the possibility of requiring POTWs to impose on industrial users plans for prevention and follow-up control of spills and batch discharges. Many commenters responded positively to this suggestion, although POTWs often stated that they wished to have maximum flexibility to address the particular concerns of their localities. Some POTWs submitted copies of their own control plans (such as ordinances, policies, and procedures). EPA has reviewed these plans and other ideas to determine which features might be suitable to include in a uniform national requirement. Following is a summary of the most frequent provisions that the Agency has found in its review of POTW control methods. It should be noted that the review included mainly larger POTWs, who represent only a small percentage of the approximately 1500 POTWs required to have local pretreatment programs.

In controlling spills and batch discharges to sewer systems, many POTWs rely upon the legal authorities contained in their sewer use ordinance or on conditions enforced through discharge permits issued to their industrial users. In general, most POTWs have not developed ways to specifically regulate batch discharges to the sewer. Batch discharges of industrial

process wastewaters are usually regulated by the same ordinances or permits as continuous discharges, and must meet the same local and federal discharge standards. They may also be regulated individually through permit requirements on notification, monitoring and reporting. However, since some batch discharges can harm a sewer system, some POTWs do specifically regulate them, frequently by requiring industrial users to obtain permission from the POTW before batch discharges are allowed to take place.

Many POTWs, however, have developed methods to help prevent and control spills. The extent of regulation, and probably the effectiveness in controlling accidental spills, varies considerably among POTWs. Controlling spills largely depends on good faith efforts by the dischargers to carry out prevention and containment measures and to notify the POTW. POTWs cannot entirely predict or prevent accidental or intentional spills from happening, although they can inspect industrial user facilities to ensure that controls are in place and properly maintained. Knowledge by the POTW of all its industrial users and their potential for spills and batch discharges is essential to the control of such problems. In addition, POTWs may also find it necessary to undertake measures to detect whether a slug discharge has occurred and to respond to any damage caused by the discharge.

The most common element of POTW control plans is a requirement that industrial users notify the POTW of accidental spills that occur. This requirement may be contained in the sewer use ordinance or exist as a permit requirement. Some requirements are generic and only require notification. Others require a description and analysis of the spilled material and later notification of remedial measures. Some POTWs have developed notification forms, and some specify minimum reportable quantities or require notification only from significant industrial users.

Almost all POTWs' plans require generally that industrial users prevent spills from occurring. Some POTWs require the use of physical measures, such as building spill containment facilities (i.e., dikes or berms). Other POTWs require development of a spill prevention or materials management program, such as toxic organic (including solvent) management plans, best management practices, and emergency response procedures. At least one POTW gives its dischargers a detailed spill prevention checklist which

includes such items as history of and potential for spills, materials management procedures, tests for safety of storage tanks, transfer and pumping stations, and procedures for loading. Some POTW require the industrial user to submit spill follow-up reports describing the response to the spill and the steps taken to prevent a recurrence of the type of spill that occurred.

After considering the comments received on the ANPR and evaluating various control plans submitted by many POTWs, EPA is today proposing to amend 40 CFR 403.8(f)(2)(v) to provide that POTWs must evaluate each of its significant industrial users to determine whether such users need a plan to prevent and control slug discharges, i.e., discharges (including spills and batches) that could lead to a violation of any of the special prohibitions or otherwise cause problems at the POTW. This evaluation is proposed to be required at the same time that the POTW conducts inspection or sampling of a significant industrial user (for a discussion of the inspection and sampling requirements, as well as the definition of "significant industrial users", see Part II-G below). Under this procedure, POTWs would use the opportunity of an inspection or sampling to examine the operational practices and physical premises of a significant industrial user to decide whether these warranted the development of a plan to handle and prevent accidental spills or non-routine batch discharges.

In deciding whether a significant industrial user should have a slug control and prevention plan, the two most important criteria are generally the quantity and types of toxic or hazardous material stored at the facility and the potential for these materials to enter the sewer system. For example, if an industrial user stores quantities of chemicals warranting attention, but the facility has not floor drains, sump pumps, or other direct ways for these materials to enter the sewer, then the POTW may decide to accord low priority to that particular industrial user. If, on the other hand, toxic or hazardous materials are stored in a room with floor drains, the POTW may wish to consider that industrial user to be in a higher risk category. Similarly, the POTW may wish to use a certain volume or concentration of a stored chemical as a cut-off point for requiring a slug plan. Examples of such cut-off points include the reportable quantities used in the County of Los Angeles' wastewater ordinance, and the reportable quantities established under the Comprehensive Environmental Response,

Compensation, and Liability Act (CERCLA) which are used as criteria by the Metropolitan Sewer District of Louisville and Jefferson County.

Another factor which POTWs may wish to consider in deciding which significant industrial users should have slug control plans is the extent to which the industrial user in question is already covered by a similar plan under RCRA. For example, generators of hazardous wastes who treat, store, or dispose of hazardous waste on-site are generally subject to the provisions governing accumulation of hazardous wastes (see 40 CFR 262.34). These provisions specify such measures as container use and management, personnel training, and procedures for emergency response. Which measures are required under § 264.34 generally depends on the amount of hazardous waste generated and the amount of time such waste remains on-site. After evaluating the physical premises of a significant industrial user and the practices and procedures developed by that user in response to other statutory requirements, a POTW may decide that these measures are a substitute for some or all of the measures that would be required under a slug control plan. Similarly, those industrial users who transport hazardous wastes or who dispose of such wastes by other means than the sewer system may be subject to the more stringent requirements of 40 CFR Part 264, such as general facility standards (including inspection requirements, personnel training, and location standards) preparedness and prevention (including facility design, required equipment, and arrangements with local authorities) and contingency and emergency procedures. If a significant industrial user is covered by such a plan, the POTW may decide that such measures are an adequate substitute for some or all of the elements required in a local slug prevention plan.

The Agency is also proposing to amend § 403.8(f)(2)(v) to provide that if the POTW decides that such a plan is warranted for a particular significant industrial user, the plan must contain, at a minimum, the following elements:

- (1) Description of discharge practices, including non-routine batch discharges;
- (2) Description of stored chemicals;
- (3) Procedures for promptly notifying the POTW of slug discharges as defined under § 403.5(b), with procedures for follow-up written notification within five days;
- (4) Any necessary procedures to prevent accidental spills, including maintenance of storage areas, handling and transfer of materials, loading and

unloading operations, and control of plant site run-off;

(5) Any necessary measures for building any containment structures or equipment;

(6) Any necessary measures for controlling toxic organics (including solvents);

(7) Any necessary procedures and equipment for emergency response; and

(8) Any necessary follow-up practices to limit the damage suffered by the treatment plant or the environment and to prevent recurrence of the type of spill that occurred.

The Agency believes that today's proposal would help many industrial users prevent and control harmful spills and batch discharges. EPA believes that the elements listed in today's proposal are the essential minimum requirements for uniform application in all approved local pretreatment programs. Since the proposal lists only the minimal elements of such plans, it should give POTWs adequate flexibility to decide the details of notification, prevention, and response procedures. The Agency notes also that the definition of significant industrial user proposed today allows POTWs to add or delete industrial users from this category according to the potential for adverse impacts at the POTW. This flexibility will allow POTWs to select the most appropriate candidates for such plans and to tailor the plans to meet conditions peculiar to their localities, a concern that was expressed by many commenters.

EPA solicits comments on all aspects of these proposed amendments. Specifically, the Agency requests comment on whether EPA should impose specific spill or batch control requirements directly on industrial users. As mentioned above, the changes to the general pretreatment regulations promulgated on October 17, 1988 (53 FR 40562) would require all industrial users, including those not covered by categorical standards, to notify the POTW of any slug load discharge which violates any of the specific discharge prohibitions. An advantage of imposing specific requirements directly on all industrial users is that discharges to all POTWs would be covered, not just the industrial users in approved local programs. In addition, POTWs would be saved the administrative burdens of evaluating and approving plans submitted by their industrial users. The Agency welcomes comments on whether these advantages would outweigh the loss of the flexibility allowed to POTWs in today's proposal.

The Agency also requests comment on whether the control plans proposed to

be required today should be limited to significant industrial users as defined in proposed 40 CFR 403.3(u) (discussed in Part II-G of today's notice), or expanded to cover all industrial users, or limited to other categories such as industrial users who submit notification of the discharge of hazardous wastes under proposed 40 CFR 403.12(p).

In addition, EPA requests comment on possible duplication between the requirements of 40 CFR 403.12(f) (notification of slug loads to the POTW), section 103(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), and section 304(b) of the Superfund Amendments and Reauthorization Act of 1986 (SARA). Section 103(a) of CERCLA requires that facilities (including indirect dischargers to sewers) which release a hazardous substance in a quantity greater than or equal to its reportable quantity (RQ) must notify the National Response Center. Section 304(b) of SARA requires such releases to be reported to local and state emergency planning commissions as well. Although section 101(10) of CERCLA provides an exemption from these notification requirements for "federally permitted" releases, including discharges to POTWs with approved pretreatment programs which are in compliance with pretreatment standards (see 53 FR 27268, July 19, 1988), the exemption will not apply to slug discharges. This, if an industrial user discharges a slug load of one of 721 CERCLA hazardous substances which is equal to or exceeds the CERCLA RQ for that substance, the industrial user discharging such a slug must notify the National Response Center, the local emergency planning committee established pursuant to section 301(c) of SARA, any State emergency planning committee for a State likely to be affected by the discharge, and the local POTW.

The Agency requests comment on whether these notification requirements are duplicative and unduly burdensome, and if so, on how they could be improved. In the Federal Register notice of July 19, 1988 proposing the regulatory definition of federally permitted releases (53 FR 27268), EPA stated that the Administrator would consider establishing an administrative exemption from CERCLA notification requirements if it appeared that certain releases pose no hazard or pose a hazard only rarely and under circumstances that would not likely result in any action being taken to respond to the hazard. At the present time, the Agency has no data indicating

that slug discharges equal or exceeding CERCLA RQs do not pose a hazard, or that action (other than the POTW's response) is unlikely to be taken to respond to such a discharge. Nevertheless, EPA solicits comment on the appropriateness of proposing such an administrative exemption in the future. The Agency is particularly interested in any technical data which might demonstrate whether discharges to POTWs of an RQ or more of any or all CERCLA hazardous substances present little danger of pass through or interference, or whether such discharges are most appropriately handled by the POTW even if such danger exists.

Alternatively, EPA solicits comment on the usefulness of exempting industrial users from having to notify the POTW of those slug discharges for which they have submitted CERCLA notification. This might be especially appropriate if POTWs were included on the local emergency planning committees established under section 301(c) of SARA.

In order to help POTWs implement slug control requirements, the Agency plans to issue a guidance manual for use in controlling and preventing accidental spills and batch discharges. The manual will include suggested methods for spill prevention by industrial users and response by POTWs, as well as suggested ways to control batch discharges by pretreatment permits and sewer use ordinances.

C. Trucked and Hauled Wastes

Many commenters on the ANPR expressed concern about discharges from liquid waste haulers. The Study recommended strengthening controls on these dischargers, and in June 1987 the Agency issued guidance to help POTWs control the discharge of such wastes to their systems (*Guidance Manual for the Identification of Hazardous Wastes Delivered to Publicly Owned Treatment Works by Truck, Rail, or Dedicated Pipe*). As a further response to the Study's recommendation, EPA had suggested in the ANPR prohibiting the introduction of hazardous wastes to sewer system by truck except at discharge points designated by the POTW.

Many commenters responded positively to this suggestion. Many POTWs already prohibit the introduction of any trucked wastes to the sewer except at designated discharge points (some ban only the introduction of non-septic wastes). In response to these comments, the Agency is today proposing to amend 40 CFR 403.5(b) to prohibit the introduction to POTWs of any trucked or hauled

pollutants except at discharge points designated by the POTW. EPA emphasizes that discharging hazardous wastes at transfer stations or discharge points (i.e., sewer manholes) without a RCRA permit would violate RCRA generator and transporter requirements under 40 CFR Parts 262 and 263 and thus is already illegal. Therefore, the principal new legal effect of today's proposed amendment would be to prohibit the discharge of trucked non-hazardous wastes to POTWs except at designated discharge points. Practically, however, this proposed requirement would give POTWs better control of all wastes into their systems (including hazardous wastes) by encouraging them to designate certain discharge points that they could monitor and, if such monitoring showed that wastes were hazardous, to prevent the introduction of undesirable wastes into the sewer system.

EPA solicits comments on the merits of this proposal. Specifically, the Agency requests comments on whether the proposed prohibited discharge standard is too extensive and should be limited to non-septic wastes only. EPA also requests comment on whether to require POTWs to develop and obtain approval of additional procedures to deal with trucked or hauled wastes (such as monitoring and sampling), or on whether to amend 40 CFR 403.8 to require POTWs to specify particular discharge sites. The Agency points out that truckers or haulers of wastes to POTWs are industrial users within the meaning of 40 CFR 403.3 (g) and (h). As such, they are already subject to the prohibited discharge standards (and the notification requirements of 40 CFR 403.12, if they transport wastes for categorical discharges or if they discharge slug loads). In addition, approved local pretreatment programs must include inspection, surveillance and monitoring programs to ensure that all industrial users (including truckers and haulers) comply with the pretreatment requirements. POTWs must, in other words, include some procedures (tests, manifests, reports, etc.) to obtain information from transporters about their wastes before these wastes can be accepted. POTWs need not await amendment of the current pretreatment regulations to begin enforcing these local provisions. However, EPA solicits comment on whether other procedures would be appropriate especially for trucked and hauled wastes, such as requiring POTWs to conduct analyses of trucked wastes so that hazardousness and

compatibility of the wastes with POTW operations could be determined.

D. Notification Requirements

Notifying POTWs of hazardous waste discharges is essential to the control of such wastes. Without workable notification requirements, any further attempt to control hazardous pollutants is difficult if not impossible.

Section 3010(a) of RCRA requires that any person who generates or transports a RCRA hazardous waste, or who owns or operates a facility for the treatment, storage, or disposal of such waste, must file a notification with EPA or with a State with an authorized hazardous waste permit program. Section 3018(d) of RCRA (enacted as part of the Hazardous and Solid Waste amendments in 1984) clarifies that wastes mixed with domestic sewage are also subject to this notification requirement.

EPA has not yet promulgated regulations to implement the section 3018(d) notification requirements. The Study recommended that these requirements be implemented to ensure that regulatory authorities were aware of discharges of hazardous wastes to POTWs. In the ANPR, the Agency suggested amending the general pretreatment regulations to require that industrial users notify POTWs (rather than EPA or the State) of any hazardous wastes discharged.

Commenters expressed very strong support for the notification requirements discussed in the ANPR. Many POTWs stated that such notification was essential to give owners and operators of treatment plants notice of hazardous wastes entering their treatment and collection systems. Some commenters urged notification of State permitting authorities as well. One commenter stated that industrial users should be required to notify EPA of such discharges, because section 3018(d) required it and because such notification would give the Agency more information about the sources and quantities of hazardous wastes entering POTWs, which would generally improve EPA oversight of local pretreatment programs.

EPA is today proposing to amend 40 CFR 403.12 to add a new paragraph (p) to require that all industrial users notify EPA Regional Waste Management Division Directors, State hazardous waste permitting authorities, and their POTW of any discharge into the POTW of a substance which is a listed or characteristic waste under section 3001 of RCRA. Such notification must include a description of any such wastes discharged, specifying the volume and

concentration of the wastes, the type of discharge (continuous, batch, or other) and identifying the hazardous constituents contained in the listed wastes. The notification must also include an estimate of the volume of hazardous wastes expected to be discharged during the following twelve months. The notification must take place within six months of the effective date of today's proposed amendments.

Small quantity generators would be exempt from these notification requirements during any calendar month in which they generate no more than one hundred kilograms of hazardous wastes, except for certain acute hazardous wastes under 40 CFR 261.5 (e), (f), (g), and (j). Generation of more than one hundred kilograms of hazardous waste in any given month would render this exemption moot and would require one-time submission of the notification. Subsequent months during which the industrial user generated more than one hundred kilograms per month would not require submission of additional notifications, except for the above-mentioned acute hazardous wastes.

In the case of new regulations under section 3001 identifying additional characteristics of hazardous waste or listing any additional substance as a hazardous waste, the industrial user must notify the POTW of the discharge of such substances within ninety days of the effective date of such regulations (except for the small quantity generator exemption discussed above).

Under the amendments proposed today, these are one-time notification requirements which do not apply to pollutants already reported under the self/monitoring provisions of 40 CFR 403.12 (b), (d), and (e), nor to pollutants already reported under the "changed discharge" requirements of 40 CFR 403.12(j). However, to clarify that § 403.12(j) also applies to the discharge of hazardous wastes, the Agency is today proposing to amend that provision to provide that all industrial users shall promptly notify the POTW in advance of any substantial change in the volume or character of pollutants in their discharge, including changes in the volume or character of any listed or characteristic hazardous wastes for which the industrial user has submitted initial notification under proposed § 403.12(p).

To ensure further control of hazardous wastes discharged to sewers, proposed § 403.12(p) would require all industrial users who submit notification of the discharge of hazardous wastes to certify that they have a program in place to reduce the volume and toxicity of non-categorical hazardous wastes generated

to the degree they have determined to be economically practicable, and that they have selected the method of treatment, storage, or disposal currently available which minimizes the present and future threat to human health and the environment. It should be noted that a similar certification requirement already applies to all generators of hazardous wastes under section 3002(b) of RCRA.

Even though section 3010 mandates only a one-time notification, it has been suggested that requiring industrial users to submit notification of all hazardous waste discharges would burden POTWs, EPA, and States with paperwork even where the quantity of wastes discharged was very small. To address these concerns, EPA has proposed the exemption from the notification requirements of those facilities that generate no more than 100 kilograms of hazardous waste per calendar month. Under 40 CFR 261.5(c), these generators are exempt from most RCRA requirements, including the notification requirements of section 3010, during a calendar month in which they generate no more than 100 kilograms of hazardous waste (not including certain acutely hazardous wastes). This exemption, if promulgated, would be consistent with RCRA program requirements and might save POTWs and industrial users the time and expense associated with notifications of small amounts of hazardous wastes. On the other hand, the exemption might allow the generation and discharge into sewers of up to 100 kilograms per month of hazardous wastes without notification, an exemption which some POTWs (particularly smaller ones) might not regard as justified.

Similarly, EPA solicits comment on whether any of the existing RCRA forms might be suitable for submission of the proposed notification requirements. The Agency also notes that certain industrial users (those with over ten employees who discharge certain listed toxic chemicals) are required under section 313 of SARA to complete annually a Toxics Release Inventory Form (EPA Form R) and submit this form to EPA and the State where the industrial user is located. EPA requests comment on whether those industrial users required to submit Form R should send a copy of Form R to the POTW in lieu of today's proposed hazardous waste notification requirements, if the toxic chemicals reported by the industrial user on Form R include those RCRA hazardous wastes for which notification would be required under today's proposal. The Agency also requests comment on

whether additional (or more specific) management requirements should be required to control wastes for which notification would be submitted under this proposal.

E. Individual Control Mechanisms for Industrial Users

As a way to carry out local pretreatment programs and implement local limits more effectively, the Agency discussed in the ANPR the possibility of requiring POTWs to use a permit system as the basis of their pretreatment programs. In responding to this suggestion, some commenters opposed such a requirement, stating that the quality of local controls for industrial users should be evaluated individually. Other commenters believed that such a program was essential for consistent and enforceable requirements. A few industry commenters believed that a permit system would result in better notice of the duties required of industrial users.

Audits conducted of local pretreatment programs have led EPA to question whether many existing control mechanisms are adequate to ensure compliance with applicable pretreatment requirements. To address this concern, and after evaluating ANPR comments on this subject, the Agency is today proposing to amend § 403.8(f) to require that POTWs with approved programs must have the legal authority to issue individual discharge permits or equivalent control mechanisms to industrial users identified as significant under proposed 40 CFR 403.3(u) (this definition is discussed below in Part II-G). Such control mechanisms shall contain, at a minimum, the following:

- (1) Statement of duration (in no case more than five years);
- (2) Statement of non-transferability without prior POTW approval;
- (3) Applicable effluent limits based on categorical standards and local limits;
- (4) Applicable monitoring, sampling, and reporting requirements;
- (5) Notification requirements for slug discharges as defined in § 403.5(b); and
- (6) Statement of applicable civil and criminal penalties for violation of pretreatment standards and requirements.

EPA believes that individual control mechanisms are the best way to ensure compliance with applicable pretreatment standards and requirements by significant industrial users. A permit system will give the industrial user clear notice of all the pretreatment requirements to which it is subject under both federal regulations and local program provisions. Such a system should make it easier for such

users to perform effective pretreatment measures before a violation can occur, rather than after. The Agency solicits comments on the merits of this proposed amendment. Specifically, EPA requests comments on: (1) The appropriateness of limiting the requirement to industrial users defined as significant under proposed 40 CFR 403.3(s), or of additional or alternative targets, such as categorical users or notifiers of hazardous waste discharges under proposed § 403.12(p); (2) whether the requirement should apply only to POTWs with more than a specified number of industrial users (and, if so, what number would be appropriate as a cut-off point); and (3) whether the list of permit conditions proposed today should be contracted, expanded, or modified.

F. Implementing the General Prohibitions Against Pass Through and Interference

The Study and the ANPP discussed three principal ways to enhance implementation of the general discharge prohibitions against pass through and interference. These three ways were: (1) Requiring that water quality-based permit limits for additional constituents of hazardous wastes be incorporated into NPDES permits issued to POTWs; (2) moving aggressively to set toxicity-based limits in NPDES Permits issued to POTWs; and (3) requiring POTWs to develop local limits for problem pollutants even if no POTW permit violation occurs or is threatened.

The Agency received many comments about the relative virtues and drawbacks of the various ways to control pass through and interference. These comments are discussed below. Also included is a discussion of forthcoming sludge control requirements that should result in improved local limits to prevent interference.

1. Water Quality-Based Permit Limits

The most favored method of preventing pass through was incorporating more water quality-based limits in permits issued to POTWs. POTWs could then use these permit limits to back-calculate local limits to prevent pass through or interference.

The Agency believes that the requirements of section 304(l) of the CWA, as amended, and EPA's ongoing toxics control program will result in an increase in the numbers of water quality-based limits in NPDES permits issued to POTWs. The provisions of section 304(1) require a progressive program of toxic pollutant control. Under this section, States must develop several lists of impaired waters,

including waters where technology-based controls and existing water quality-based controls are not adequate to meet water quality standards for the priority pollutants or adequate to protect designated uses.

To further provide for the improvement of water quality, section 304(l) requires the development of individual control strategies for waterbodies which are impaired substantially or entirely due to point source discharges (including POTWs) of section 307(a) toxic pollutants. Under this provision, States must identify (within two years of enactment of the amendments) waters that are unlikely to comply with water quality standards after implementation of technology-based requirements. States must then identify particular point sources (including POTWs) that may be causing the violation of standards in those waters and develop individual control strategies to reduce toxics and meet standards in such waters not later than three years after the strategy is established.

Section 304(1) directs immediate attention to establishing controls where there are known impacts due entirely or substantially to point source discharges of section 307(a) toxic pollutants. The Agency has prepared draft final guidance for States and EPA Regions on how to address these problems within the available control mechanisms and data. The guidance also directs States and EPA Regions to address all known sources of toxicity in receiving waters (including hazardous constituents) as required by sections 301(b)(1)(C), 303(c), 303(d), 303(e), 401, and 402(a), of the CWA. EPA regards the new statutory requirements to control point sources as part of the ongoing national program for toxics control. Initially, all known problems due to any pollutant are to be controlled (using both new and existing statutory authorities) as soon as possible, even if the problem does not involve section 307(a) pollutants.

As stated above, most commenters on the ANPR believed that increasing the use of water quality-based limits in NPDES permits issued to POTWs is the best way to help POTWs develop local limits to control the pass through of toxic and hazardous pollutants. The Agency believes that the individual control strategies mandated by the CWA amendments and the ongoing national toxics control program will increase the number of such permit limits, which POTWs can use to derive the necessary local limits.

2. Sludge Control

Another provision of the amended CWA has far-reaching implications for the development of local limits. These are the provisions dealing with the regulation of sewage sludge. The amendments set forth a comprehensive program for reducing environmental risks and maximizing the beneficial uses of sludge. The amendments mandate the promulgation of technical criteria for toxic pollutants in sewage sludge and the specification of acceptable sludge management practices, and require that these standards be implemented through permits. To carry out these requirements, EPA is currently developing acceptable contaminant levels and management practices for an initial group of toxic pollutants for the five major sludge use and disposal options: Land application, distribution and marketing, incineration, landfilling, and ocean disposal (although not all pollutants will be regulated for each option).

In addition to calling for the promulgation of technical criteria for the use and disposal of sewage sludge, the 1987 amendments to section 405 also contain a significant departure from previous statutory provisions regarding implementation. The amendment applies the requirements to all persons and further requires that the above technical criteria and management practices be included in an NPDES permit unless such criteria have been included in a permit issued by one of several other listed federal permit programs or an approved State program. This means that, for the first time, permits will be the required way to implement the federal technical criteria. When the sludge criteria are promulgated, NPDES permits issued to POTWs or other treatment works treating domestic sewage must include these requirements unless they are included in another appropriate permit. These requirements can be used by POTWs to calculate the local limits necessary to allow for the widest range of sludge use and disposal options.

Section 405 as amended also requires that, before promulgation of the criteria, the Administrator shall impose conditions in permits issued to POTWs under section 402 or to take such other measures as the Administrator deems appropriate to protect public health and the environment from adverse effects which may occur from toxic pollutants in sewage sludge. To incorporate sludge limits into permits before promulgation of such criteria, such limits will have to be developed on a case-by-case basis. To implement this requirement, the

Agency is preparing guidance for EPA Regions and States. The guidance will set forth all existing federal and State requirements, and will recommend sludge contamination limits and management practices based on current EPA and State requirements. These limits and practices can also be used by POTWs to begin developing the appropriate local limits.

3. Toxicity-Based Permit Limits

Commenters on the ANPR also expressed general support for the use of toxicity-based limits in NPDES permits issued to POTWs, although some commenters were concerned about the technical difficulties involved in setting permit limits in response to such testing. As a supplement to limits based on numerical standards for specific chemicals, the Agency has strongly encouraged NPDES permitting authorities to establish toxicity testing requirements in municipal permits and to develop whole effluent toxicity-based permit limitations as appropriate to control toxicity to aquatic life. It should also be noted that the expanded use of biomonitoring was one of the principal recommendations of the Study. EPA has encouraged this approach to controlling toxic effluents for several reasons. First, it allows POTWS and permit writers to assess certain toxic effects (such as lethality, growth, and reproductive success) of a complex mixture by integrating the interactions of the constituents into a single measure. Second, toxicity-based permit limits provide a numeric target for measuring violations of the narrative standard "No toxics discharged in toxic amounts". This approach allows the investigation of the cause of toxicity through toxicity reduction evaluations (TREs). A TRE is a study which uses toxicity tests to find ways to reduce or control effluent toxicity. Such tests can be used in a TRE to find the specific toxicant or toxicants causing effluent toxicity and to identify a treatment which reduces or eliminates unacceptable toxic effects. Toxicity-based permit limits can also be particularly useful where national categorical pretreatment standards do not adequately address local toxicity problems and/or where there are no numerical criteria currently available, as is the case for most toxic and hazardous constituents.

In encouraging the use of toxicity testing, the Agency has recommended that testing requirements be based on the technical recommendations in the *Technical Support Document for Water Quality-Based Toxics Control*, hereafter the "TSD" (EPA 440/4-85-032, September, 1985). This document

describes the rationale for whole effluent toxicity controls and the action to be taken to access receiving water effects. It recommends a series of toxicity screening tests based on effluent dilution. Permit writers can use the results of the screening tests to determine if additional testing requirements, local limits, and/or toxicity limits in the permit should be established.

Because EPA believes that toxicity evaluation is an essential step towards developing sound NPDES permit limits and local limits to control toxic and hazardous pollutants, the Agency is today proposing to amend 40 CFR 122.21(j) to require that *all* existing POTWs conduct whole effluent toxicity screening and/or definitive toxicity testing and submit the results of such screening or testing as part of their NPDES permit applications. The Agency anticipates that permit writers will use the toxicity screening information generated for the permit application to justify permit limitations and toxicity reduction evaluations when the testing reveals water quality standards violations. The toxicity information will also form the basis for monitoring requirements and other permit conditions, when appropriate, to ensure ongoing compliance with water quality standards.

The screening which the Agency is proposing to require is adapted from the TSD because this document is in wide use and has proved to be a useful tool for conducting such protocols. First, an initial dilution screen should be performed. The POTW should compare the flow rate of its receiving stream (in terms of the design low flow specified by the State) to its effluent design flow rate. For marine, estuarine, and standing water discharge situations, dilution can be calculated using existing State standards and corresponding allowable dilution calculation procedures.

If dilution exceeds 10,000 to 1, and there is a reasonable rapid mix of the effluent outside of the initial dilution area in the receiving water, the effluent need not be tested further. If dilution is less than 10,000 to 1, or mixing is not rapid and toxicity within a plume is of concern, then toxicity screening tests are proposed to be required as follows:

(1) In cases where dilution is between 1,000 to 1 and 10,000 1, or where a poorly mixed effluent plume in a large receiving water is of concern (even with greater dilution), acute toxicity screening tests must be performed by collecting six effluent samples in one day (grab or short-term composite) each quarter over a one-year period. Twenty-four hour

screening tests must then be conducted in 100% final effluent, using an invertebrate species and a fish species in each sample, and following the protocols specified in *Methods for Measuring the Acute Toxicity of Effluents to Aquatic Organisms*, Peltier, W. and C.I. Weber, 3rd edition, 1985, EPA 600/4-85-013. The Director (i.e., the Regional Administrator or the State NPDES Director) may require alternative tests procedures and may require the submission of definitive testing data, generated according to procedures specified by the Director, to replace or supplement the screening test data specified above.

(2) If dilution is less than 1,000 to 1 but greater than 100 to 1, chronic toxicity screening tests must be performed by collecting six samples (24-hour composite) on six successive days each quarter over a one-year period. Seven-day static screening tests must then be conducted in 100% final effluent, using an invertebrate species and a fish species, daily composite samples to renew test solutions, and following protocols specified by the Director. The Director may require alternative test procedures and may require the submission of definitive testing data, generated according to procedures specified by the Director, to replace or supplement the screening test data specified above.

(3) If dilution is less than 100 to 1, screening is inappropriate, since at these ambient concentrations even minimally toxic effects can cause unacceptable toxicity. Instead, definitive toxicity data generation shall be performed according to procedures required by the Director.

Today's proposal would require the results of any acute or chronic toxicity screening or testing performed above to be submitted to the Director as part of the POTW's NPDES permit renewal application. The current regulations (§ 122.21(d)(1)) require that existing POTWs must submit permit renewal applications at least 180 days before the currently effective permit expires. The Director may grant permission to submit the application at a later date (but not later than the expiration date of the existing permit). Therefore, any screening or testing required under the above procedures should be commenced in time to be completed before the 180-day deadline.

To address States with screening and testing procedures that are equivalent to those proposed above, the agency is also proposing to allow the POTW to use such equivalent procedures if they are accepted by the Director. However, the Agency solicits comment on other

definitive data generation procedures that would be appropriate for inclusion in NPDES permit applications, and on whether follow-up corrective measures to reduce toxicity should be specified in 40 CFR Part 122. For example, POTWs might be required to follow the recommendations of the TSD on definitive data generation, using uncertainty factors and dilution data. Where the effluent is shown to have toxic impact (as defined in the TSD trigger mechanism), corrective action could be required.

An alternative method of collecting definitive toxicity data might be to require POTWs with high dilution ratios (1000 to 1 or greater) to conduct acute tests on three species quarterly for the year preceding submission of the permit application, while POTWs with low dilution ratios (less than 1000 to one) might be required to conduct chronic tests on three species quarterly. Still another option is requiring POTWs with approved programs to conduct both acute and chronic toxicity tests on three species once a month for a year before submission of the permit application, while all other POTWs might be required to conduct the same test but at a reduced frequency, such as quarterly. Where the effect concentrations exceed the allowable dilution (as defined by the State standards) corrective measures to reduce toxicity would be required.

Corrective measures to reduce toxicity include toxicity-based permit limits (which should in any event be required in case of a violation of State water quality standards), requiring further testing, or toxicity reduction evaluations (TREs). The Agency has recommended guidelines for making decisions in the TSD. If the Director requires further testing to generate more definitive data, the Agency has recommended several methods manuals for conducting such testing (see, e.g., the above-mentioned *Methods for Measuring the Acute Toxicity of Effluents to Aquatic Organisms*, Peltier, W., and C.I. Weber, 3rd edition, 1985, EPA Office of Research and Development, Cincinnati, Ohio, EPA-600/4-85-013; *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Horning, W., and C.I. Weber, EPA Office of Research and Development, Cincinnati, Ohio, EPA-600/4-85-014; *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, Horning, W., and C.I. Weber. These methods, where properly followed, should give a valid assessment of potential water quality impact.

As discussed above, TRE's may be necessary to bring a discharger into compliance with a toxicity-based permit limit. A TRE is a study which employs toxicity tests and various types of treatment to identify specific ways to reduce effluent toxicity. The effluent is subjected to typical laboratory techniques such as aeration, filtration, and fractionation. After each step, toxicity tests are conducted on altered and unaltered effluent. The toxicity is then attributed to compounds removed or neutralized in that step at which the toxicity is significantly reduced. If a pollutant is identified as the cause of the toxicity, it can be limited in the permit and then controlled through permit limits. If a treatment option (such as filtration) is shown as capable of reducing toxicity, the POTW can pursue that treatment to meet its whole effluent toxicity requirements. A TRE can thus be used to set limits for specific toxicity-causing pollutants or to identify a treatment which will reduce toxicity to the level required by a toxicity-based permit limit. TREs can be conducted before permit issuance, under a permit compliance schedule, or in response to an administrative order. Protocols for conducting TRE's are currently available in draft from EPA's Office of Water Enforcement and Permits.

The Agency believes that these proposed requirements for detecting and controlling toxicity will help to achieve better control of toxic and hazardous wastes discharged from POTWs. The need to assess and control these pollutants should not be underestimated. EPA's proposal to require toxicity testing by POTWs is based upon evidence that these sources continue to discharge toxic substances (including hazardous constituents) in significant amounts.

The Agency emphasizes that whole effluent toxicity-based controls are a complement to and not a substitute for chemical-specific controls. Neither of these methods is by itself sufficient to control adverse toxic impacts in all cases. Permitting authorities also need the results of chemical effluent monitoring in order to develop effective permits for POTWs. To this end, the Agency plans to propose this year new application requirements for POTWs, along with a form to be used in submitting the application. This proposal will solicit comment on requiring POTWs to test their effluent for (at a minimum) the CWA priority pollutants. The final application requirements, when promulgated, should incorporate requirements for both whole

effluent and chemical-specific monitoring.

4. Control of Indirect Dischargers: Alternative Approaches

A. General issue. The amendments proposed in Parts A-E above will help POTWs address incidents that affect plant efficiency and should provide additional assurance that POTWs can function properly and comply with their permits at all times. It should be noted that although the agency's concern in the amendments proposed today is primarily with hazardous and toxic pollutants, EPA encourages POTWs to adopt these mechanisms as necessary to deal with any pollutant of local concern. In addition, EPA believes that in some cases further measures are necessary to give POTWs adequate control of wastes discharged to sewers. This belief was supported by commenters on the ANPR who expressed concern that existing local limits and categorical standards were not sufficient to deal expeditiously with harmful quantities of such wastes entering POTWs.

This concern is largely attributable to two causes: (1) The inherent limitations of categorical standards and local limits developed to prevent violations of NPDES permits issued to POTWs and (2) the likely increase in volume of hazardous and toxic wastes discharged to POTWs. To address such environmental concerns and to respond adequately to the Congressional directive of section 3018(b), the Agency has considered how best to exercise its broad authority to control these discharges in a way that is effective, expeditious, and administratively acceptable.

b. Nature and scope of environmental concern. The Study was expressly mandated by Congress to determine whether Clean Water Act programs could control the discharge of hazardous wastes to POTWs for adequate protection of human health and the environment. Although the Study recommended retention of the Domestic Sewage Exclusion, it also concluded that the level of many hazardous constituents in POTW wastewaters (particularly organic compounds) raised concerns about potential effects on human health, the environment, and POTW operations. Even after full implementation of pretreatment standards, large amounts of hazardous, toxic, and carcinogenic chemicals are discharged to POTWs. To illustrate the scope of the problem, the Study estimated that:

- 7,260,000 pounds of hazardous metal constituents are discharged to POTWs

each year even after implementation of categorical pretreatment standards.

- Between 81,400,000 and 132,000,000 pounds of priority hazardous organic constituents are discharged to POTWs each year even after implementation of categorical pretreatment standards.

- Approximately 138,600,000 pounds of nonpriority hazardous constituents (mostly organics) are discharged to POTWs each year, few of which are regulated by categorical standards. The organics industries alone are estimated to discharge wastewater containing twice as many pounds of nonpriority organic constituents as priority organic constituents.

- For the indirect dischargers in the pharmaceutical manufacturing category, total cyanide is currently the only pollutant regulated under categorical pretreatment standards. Yet significant loadings of hazardous constituents are discharged by this industry, especially methanol, acetone, ethyl acetate, xylene, chloroform, methylene chloride, and toluene.

- Pesticide manufacturing is another significant discharger of hazardous constituents to POTWs including benzene, chlorobenzene, and toluene.

The Study expressed concern about the incomplete coverage of organics by categorical standards (such as pharmaceuticals) and the fact that unregulated or emerging industries are also likely to be significant sources of hazardous waste discharges. These industries include hazardous waste treatment, solvent and oil recovery, and service-oriented industries such as transportation sources that tend to discharge variable quantities of toxic pollutants. Some of the organics discharged from both categorical and noncategorical industries are subject to less than 50 percent removal at unacclimated POTWs. As a particular example of an expanding industry whose wastewaters are not specifically addressed by categorical standards, the Study cited hazardous waste treatment and disposal facilities and noted that almost all RCRA characteristic and listed wastes have been reported as potentially present in discharges from these facilities.

In addition, it should be noted that estimated loadings of hazardous constituents found in the Study from all industries are likely to be conservative. Lack of precise data on nonpriority constituents could easily mean that the figures estimated by the Study are low, and as more research is done into the effects of various toxic and hazardous pollutants, the list of pollutants of concern may increase. More

importantly, loadings of hazardous wastes to POTWs are almost certain to increase in the future due to the Domestic Sewage Exclusion, the virtual ban under RCRA of liquid wastes in landfills, and the development of many new toxic chemicals every year. This likely increase argues for the need to take action to reduce these loadings.

The Agency's concern about these massive loadings is heightened by the fact that some hazardous constituents are toxic in very low amounts. For example:

- Cyanide is chronically toxic to freshwater aquatic organisms at concentrations above 5.2 ug/l.

- Benzene is chronically toxic to marine aquatic organisms in concentrations above 0.7 mg/l.

- Silver is acutely toxic to freshwater aquatic organisms in concentrations above 4.1 ug/l.

The Study devoted considerable effort to examining the potential effects on environmental media from hazardous constituents discharged to POTWs. Modeling techniques were used to project likely instream concentrations of certain hazardous constituents, which were then compared to applicable aquatic and human health criteria and standards to determine potential impacts on surface water quality (full compliance with categorical pretreatment standards was assumed). The modeling techniques revealed that some projected loadings of hazardous constituents exceeded water quality criteria even after imposition of categorical standards (pollutants of concern included cadmium, silver, chromium, copper, mercury, lead, cyanide, and zinc). The Study also reviewed existing POTW bioassay results, which revealed that a significant number of POTWs had toxic discharges. The Study therefore concluded that the current categorical standards cannot by themselves resolve water quality concerns, and projected that other hazardous constituents may also be passing through treatment systems to create water quality problems. Besides water quality concerns, the Study found that hazardous constituents discharged to POTWs can also enter the environment through other pathways such as the disposal of sewage sludge contaminated with hazardous metals or the volatilization of organic compounds contained in industrial discharges (these pollutants may be emitted both to the ambient air and to the POTW workplace).

EPA believes that these findings firmly demonstrate the importance of expanding the current exercise and the

Agency's broad authority to address hazardous wastes discharged to POTWs.

c. *Current control mechanisms.* To date, the Agency has exercised its pretreatment authority primarily through categorical standards and local limits. Although these controls address many concerns, both have limitations which prevent them from being a fully effective solution to the problems presented by discharges of hazardous constituents.

With respect to categorical standards, the Agency must collect and examine exhaustive data on the industries covered, including pollutants discharged and treatment systems used. EPA is currently evaluating many regulated and unregulated industries to determine which are appropriate candidates for new or revised categorical pretreatment standards. Developing these standards, is, however, a lengthy and expensive process, often taking many years.

The second principal means of controlling hazardous waste discharges to POTWs is the application of local limits. Local limits must be developed as needed to prevent interference with POTW operations and pass through of pollutants to receiving waters.

POTWs have generally developed adequate local limits to control interference from and pass through of pollutants that were of most concern when the pretreatment program was first developed (i.e., metals and some priority organics), but these limits have sometimes not been effective in dealing with the loadings of hazardous constituents for several reasons. First, calculating local limits for organics (such as many of the hazardous organic constituents in the Study) can be technically difficult if numeric criteria for these pollutants are not contained in POTWs' NPDES permits. Without such limits, it is impossible to establish pass through under the current definition of that term at 40 CFR 403.3(n). Second, even when pass through is demonstrated, the source of the toxicity can be difficult to locate if the pollutant concentration in a POTW's influent is highly variable and the matrix of pollutants contained in that influent is highly complex. Although EPA has issued guidance to POTWs on developing local limits, these limits may need to be supplemented under certain circumstances.

d. *Commercial hazardous waste treaters: An industry of particular concern.* The Agency's examination of the existing control mechanisms has led it to conclude that even if additional categorical standards and improved local limits were developed, there may still exist a gap in the ability of the

current pretreatment program to deal comprehensively with the concerns raised by the Study. Of particular concern is the aqueous waste treatment and disposal industry. These facilities provide physical, chemical, and/or biological treatment of hazardous and nonhazardous wastewaters, including leachate from landfills and process wastewater from manufacturing operations. Aqueous treaters include both on-site generators that are not regulated by categorical standards but treat process wastewater, and commercial hazardous waste treaters (hereafter referred to as CWTs). Facilities that transport wastes to CWTs include landfills that choose not to provide treatment on-site or do not have an acceptable receiving stream or sewer line available, and manufacturers who find it more cost-effective or otherwise preferable to contract haul their wastes to a commercial facility. The Agency estimates that there are now over one hundred CWTs in the country, most of which discharge to POTWs and many of which accept categorical wastes. Flow rates at these facilities average about 45,000 gallons per day. The Study found that several incidents at POTWs have been associated with discharges from CWTs. These events include disruption of treatment processes, hazardous fumes, and contamination of sewage sludge. The incidents are of concern in light of studies by EPA and the Association of Metropolitan Sewerage Agencies (AMSA) showing that the number of waste treatment and disposal facilities are increasing substantially. The AMSA survey indicated that the number of requests for connection to POTWs by these facilities may cause increasing problems at POTWs unless they are adequately controlled.

Data collected recently by the Agency clearly indicate that the wastes accepted by these facilities contain significant amounts of hazardous constituents (particularly organics) that pass through the CWT system, receiving inadequate treatment before they are discharged to POTWs. Treatment provided at CWTs may include treatment of specific waste types (for example, cyanide destruction), physical/chemical treatment, biological treatment, and tertiary treatment. Although the physical/chemical treatment technologies at some CWTs are primarily designed to remove metals and other inorganic pollutants, the wastes accepted by these facilities contain significant amounts of organics that pass through the system, receiving limited treatment. This poor treatment received by organics is reflected in the effluent levels of biochemical oxygen

demand (BOD), total organic carbon (TOC) and chemical oxygen demand (COD). Better reductions are achieved for heavy metals. Compared to physical/chemical treatment systems, the advanced treatment systems in place at some CWTs are more effective in removing organic compounds; however, high effluent concentrations of organics are common even with advanced treatment such as carbon adsorption. There are also high effluent concentrations of indicator compounds such as BOD, TOC, and COD, which demonstrates relatively poor removal of organics.

Organics found frequently and at high concentrations in the effluent from CWTs include industrial solvents such as acetone, benzene, methylene chloride, and methyl ethyl ketone. These findings show that the physical/chemical technologies, as currently operated by CWTs, are not removing organics adequately and that the more advanced technologies are not producing as much removal as would be expected, perhaps because of poor design or lack of proper operation and maintenance. The findings demonstrate the clear potential for discharge of poorly treated hazardous wastes to POTWs or surface waters. In addition, comparison of raw wastewater samples from CWTs with water quality criteria for acute and chronic toxicity, human health, and drinking water revealed numerous exceedances for several categories of pollutants. It should also be noted that the Study estimated that there is less than 50% removal of all four of the industrial solvents mentioned above at unacclimated POTWs.

CWTs are also difficult to regulate through traditional local limits. The waste discharged by many of these facilities is complex and varying in quality. Calculating local limits for CWTs can be technically difficult because of the variability of the influent to these facilities and the absence of limits for many toxic and hazardous pollutants in NPDES permits issued to POTWs.

e. *Options for addressing CWTs.* To address the concerns presented by CWTs, the Agency is considering three options for the regulation of these facilities. The first is the combined wastestream formula (by which they are currently covered), the second is categorical standards, and the third is technology-based local limits, which will be explained in more detail below.

Combined Wastestream Formula

In the absence of categorical standards specifically developed for

CWTs, these facilities are now regulated by any other applicable categorical standards as applied using the combined wastestream formula. Industry has been very vocal in criticizing the administrative difficulties of this regulatory scheme. The formula is a mathematical method used to determine effluent limits for CWTs receiving contributions from multiple wastestreams (both categorical and noncategorical). On June 12, 1986 (51 FR 21454) EPA published a notice of proposed rulemaking which explained that this formula applies to "centralized" waste treaters (many of these facilities are located off-site and thus are equivalent to CWTs). EPA also proposed to require that industrial contributors provide their centralized waste treaters with information about the nature of their process, volume of wastes, pollutant constituents, and any categorical pretreatment standards applicable to the contributors' processes. This information is necessary for the centralized waste treater (or CWT) to apply the combined wastestream formula, and thus determine its effluent limits.

The Agency solicited comments on whether other information is necessary for such an analysis and on whether the States should develop a form to standardize the information provided to these facilities. EPA also solicited comments on several alternative regulatory schemes. These included promulgating specific categorical pretreatment standards for these facilities, relying solely on local limits, and controlling each pollutant discharged by the facility by applying the most stringent numerical limit for that pollutant taken from all the categorical standards applicable to the wastes received by the facility.

EPA received many comments on this issue. Many industry commenters questioned the feasibility of applying the combined wastestream formula to their facilities. They believed that the formula was too inflexible and that variability of incoming wastestreams to CWTs would require frequent recalculation of the formula, thus rendering limits out-of-date as soon as they were calculated and leading to excessive administrative complexity. There would be little room for local discretion in controlling CWTs on a facility-specific basis. They also stated that the required information from their contributors might be difficult to obtain, update, or verify.

Because of the comments and the practical issues they raised, EPA has decided not to finalize the part of the June 12, 1986 proposal which addressed

CWTs at this time. However, the options discussed in that notice are still under active consideration (in particular the combined wastestream formula). The Agency believes that some commenters have underestimated the flexibility inherent in the formula (see 40 CFR 403.6(e)). If contributions to the CWT have a record of consistency and no change is projected, a single set of limitations would be developed and implemented. However, where the wastes introduced to the CWT fluctuate, several alternative limitations could be developed corresponding to different waste configurations discharged to the CWT and would be implemented according to which configuration currently prevailed. This approach would eliminate the burden of recalculating limits to reflect changes in the CWT influent and would reduce the uncertainty about applicable limits.

The principal step in implementing these alternative limits would be to obtain historical data from the CWT on its contributions at various times over the calendar year. If the contributions remained consistent over a period of time (for example, if over a particular season the CWT received a relatively fixed percentage of wastes from metal finishers, another relatively fixed percentage from coil coaters, and another from battery manufacturers or copper formers) then limits could be calculated to take effect whenever these percentages changed. The alternative or consecutive limits could be written into the permit or other agreement between the POTW and the CWT.

EPA requests comment on the feasibility of applying the combined wastestream formula to CWTs, and on whether this approach would be more practical to implement than the other options discussed today. Comments submitted concerning the options discussed in the June 12, 1986 proposal need not be resubmitted; they will be incorporated as part of the rulemaking record.

Categorical Standards

The second principal option being considered by the Agency is the development of categorical standards specifically for CWTs. If a decision is made to develop these standards, promulgation will probably take several years. It is for this reason that the Agency is proposing a third principal option for regulating CWTs, i.e., technology-based local limits. These limits could serve as an interim measure before categorical standards are developed, or as a permanent measure if no standards are promulgated. They could also be used to reduce loadings of

certain pollutants that are locally significant but not nationally regulated. Local Limits Based on a Best Professional Judgment (BPP) Determination of Best Available Technology Economically Achievable (BAT)

Section 307(b) directs the Administrator to establish pretreatment standards "to prevent the discharge of any pollutant through treatment works * * * which are publicly owned, which pollutant interferes with, passes through, or otherwise is incompatible with such works". The legislative history of this provision demonstrates Congress' belief that

* * * comprehensive water pollution abatement requires that controls should * * * be extended to any industrial discharge into municipal waste treatment works in order to prevent pollutants from entering such works if they would impair the effectiveness of the waste treatment works, or if they would pass untreated or inadequately treated wastes through the treatment works into navigable waters * * * [I]t is clear that the Administrator may be unable to establish such [pretreatment] standards for all pollutants which require such control. Therefore, the provisions of this section do not relieve municipalities and States from establishing pretreatment standards to control rate, flows, and concentration of industrial discharges into waste treatment works.

(Report No. 92-414 of the Committee on Public Works of the U.S. Senate, 2 Leg. History 1415, 1973).

The legislative history also reveals that Congress intended wastes from indirect dischargers to ultimately receive the same level of treatment given to wastes from direct dischargers before these wastes enter navigable waters. In discussing the 1977 amendments to the Federal Water Pollution Control Act, it was stated that

* * * the combination of pretreatment and treatment by the municipal treatment works shall achieve at least that treatment which would be required if the industrial user were making a direct discharge.

(Joint Explanatory Statement of the Committee of Conference, 3 Leg. History 271, 1978).

In addition, there is no specific statutory language restricting the Agency in fashioning a program to deal with the concerns that Congress was addressing. Rather, Congress provided EPA with the discretion to establish program requirements that effectuate the goals of the pretreatment program.

The Agency's current policy of basing local limits on the prevention of POTW NPDES permit violations was appropriate at the time the policy was first established. However, this policy

was not a full exercise of EPA's statutory authority. Instead, it was a prudent exercise of as much of that authority as was appropriate at the time. The following proposal is an incremental and essential change in the pretreatment program to improve its effectiveness and address problems revealed by the Study.

EPA is today proposing to amend § 403.8 to require that POTWs with approved programs receiving discharges from CWTs (as defined in proposed § 403.3(e)) develop and implement local limits based on a BPJ determination of BAT. These case-by-case technology-based limits would be very similar to the BPJ limits which have been routinely developed by NPDES permit writers during the past decade for direct dischargers not covered by national effluent limitations guidelines.

As noted above, POTWs must currently develop local limits to prevent pass through under § 403.3(n) (i.e., a discharge from an industrial user that, alone or together with other sources, causes a violation of the POTW's NPDES permit). Since many of the pollutants discharged by CWTs are usually not restricted by NPDES permits issued to POTWs, EPA is also proposing a supplementary definition of pass through for POTWs receiving discharges from CWTs. The proposed new definition would provide that pass through means the failure of the CWT and the POTW to reduce pollutant discharges from the POTW to the degree which would be required by section 301(b)(2) of the CWA if the CWT discharged directly to surface waters. To further this requirement, the Agency is also proposing to amend § 403.5(c) to provide that POTWs receiving discharges from CWTs must develop and enforce specific local limits for these facilities to prevent pass through as defined in the proposed supplementary definition. It is probable that many POTWs already have the legal authority to impose technology-based limits under local statutes or ordinances.

(Note that today's proposal also would renumber § 403.3(n), to become § 403.3(o).)

The proposed amendments require the POTW to determine whether the discharge from a CWT is receiving the level of effluent treatment which would be required if the CWT were a direct discharger, after taking into account the treatment capability of the POTW. In order to determine what would constitute best available technology for the CWT, the POTW could focus on pollutants regulated in the categorical standards for industries contributing to

the CWT and any other pollutants of concern (priority or nonpriority) discharged by the CWT. The POTW should take into account all the factors enumerated in section 304(b)(2)(A) of the CWA and 40 CFR 125.3(c)(2) that are considered in developing BPJ limits for direct discharges. These include the age of facilities and equipment processes employed, the engineering aspects of various control technologies, and the costs of effluent reduction.

For examples of what would constitute best available control technologies for various pollutants, the POTW may wish to consult effluent limitations guidelines, or categorical standards for other industries (e.g., in the metal finishing category at 40 CFR Part 433, precipitation/clarification for metals, alkaline chlorination for cyanide, and hexavalent chromium reduction; in the organics, plastics, and synthetic fibers category at 40 CFR Part 414, steam stripping for organics). Alternatively, the POTW may wish to conduct its own analysis. In addition, EPA plans to develop technical information for use by POTWs in determining appropriate technology-based treatment. Based on the data available so far, the Agency has tentatively concluded that many CWTs may be able to meet BAT-based limits by better operation and maintenance, such as constructing additional storage tanks, piping and pumps for further waste segregation or collection for treatment. Such improvements may often be possible at relatively low cost (approximately fifty thousand dollars). Other CWTs may need to install more advanced treatment technology which could be more expensive (up to five hundred thousand dollars, including operation and maintenance). POTWs may wish to conduct a careful case-by-case examination of the CWT in question to determine if adequate pollutant removal can be achieved by better operation and maintenance rather than by installation of additional technology.

As mentioned above, the Agency encourages POTWs to adopt this mechanism as necessary to deal with pollutants of local concern as well as toxic and hazardous pollutants. After determining what would constitute best available technology for the various pollutants discharged by the CWT, the POTW would determine whether the actual reduction achieved by the CWT plus the reduction achieved by the POTW were equal to the hypothetical BAT limits. The most practical way to measure the POTW's removal for a specific pollutant would be to employ EPA's removal credits protocols (see 52

FR 42434 (November 5, 1987) and 46 FR 9404 (January 8, 1981)). Generally speaking, these protocols require twelve representative samples (of influent and effluent) to be taken over the course of a year, after which removal for each sample is determined by measuring the difference as a percentage of the influent concentration. The POTW would be required to develop the previously calculated technology-based local limits for the CWT if the combined removal by the CWT and the POTW for the pollutant in question turned out to be less than that which would be required to meet such hypothetical BAT limits. In order to keep the limits up to date, they should be evaluated every five years (see proposed § 122.21(j)(2)).

These technology-based local limits would be implemented and enforced in the same manner as any other local limits. § 403.8(f)(4) requires POTWs to develop local limits as required under § 403.5(c)(1) (which, as proposed to be amended today, would require the development of technology-based local limits for CWTs) or demonstrate that such local limits are not necessary. In the case of technology-based local limits, such a demonstration would normally include a showing that the pollutants in the discharge from the CWT are reduced (after treatment by the CWT and the POTW) to the degree which would be required if the CWT were a direct discharger. Requirements to develop and update such local limits as are necessary will be reflected in the POTW's approved pretreatment program and incorporated into the POTW's permit upon modification or reissuance (see proposed § 403.8(f)(1)(iii) and existing § 403.8(c). Like all other applicable pretreatment requirements, the failure to develop necessary local limits will continue to be subject to enforcement, either by EPA or an approved NPDES State, as a violation of the POTW's NPDES permit. However, the Agency notes that under most circumstances pass through as defined in proposed § 403.3(o)(2) would not be enforced in the absence of local limits specifically developed to prevent such pass through.

f. Other Industries. POTWs may also need to use their authority to develop technology-based local limits for other industries. To this end, the Agency is considering requiring POTWs to develop such limits for pesticide and pharmaceutical manufacturers. The pharmaceutical industry ranks high in total hazardous constituent loadings for priority pollutants after the implementation of categorical pretreatment standards, and the

pesticide industry has been among the nation's top ten dischargers of hazardous constituents. The Agency is currently reviewing pharmaceutical manufacturing to determine whether to propose new categorical pretreatment standards for this industry, and it has already initiated rulemaking procedures which will lead to the eventual promulgation of standards for the pesticides industry. However, the Agency nevertheless believes that alternate controls may be necessary.

g. Solicitation of Comments. EPA invites comment on which of the approaches discussed today is the most practical and effective way to further the recommendations of the Study by improving local limits. Specifically, EPA solicits comments on all aspects of the proposed requirement that POTWs develop local limits based on a BPJ determination of BAT, especially the merits of this approach compared to the combined wastestream formula. The approach might prove to be effective alternative to the formula and would address some of the concerns expressed by commenters responding to the June 12, 1986 notice. In particular, POTWs would be able to address CWTs on a case-by-case basis and develop limits that were tailored to the particular facility. The Agency requests comment on whether POTWs should also be allowed to use the combined wastestream formula to develop local limits for those CWTs for which the formula might be more appropriate, i.e., those with a relatively invariable or predictable influent.

The Agency also solicits comments on whether to require technology-based local limits for pharmaceutical and pesticide manufacturers. In addition, EPA wishes to receive comments on the practical implementation aspects of technology-based local limits for POTWs, whether for CWTs or industrial users in general. The Agency plans to make technical information available for use in developing such limits, but welcomes comment on this issue and on whether any additional reporting or compliance requirements are necessary for these limits.

EPA also solicits comments on whether to specify in the definition of pass through under § 403.3(o)(2) that such pass through is for purposes of local limits development only and is not subject to the general prohibition of pass through in 40 CFR 403.5(a)(1) in the absence of local limits specifically developed to prevent such pass through. The Agency requests comment on whether such language is necessary or would be redundant in light of 40 CFR

403.5(a)(2), which provides an affirmative defense for an industrial user who demonstrates that it did not know or have reason to know that its discharge caused pass through or interference.

5. Other Problems at POTWs

It should be noted that § 403.3 defines interference as a discharge, which, alone or in conjunction with other sources, prevents the use or disposal of sewage sludge in accordance with (among other authorities) the Clean Air Act (CAA). POTW sewage sludge incinerators are currently regulated under section 112 of the CAA (National Emissions Standards for Hazardous Air Pollutants, or NESHAPS). EPA has promulgated emission rates for mercury and beryllium based on acceptable ambient concentrations, and the Agency is considering other pollutants, including organics, for regulation. As further NESHAPS are promulgated, POTWs will be required to develop local limits as necessary to ensure that their sludge incineration facilities meet the emissions limits.

With respect to air emissions from chemicals discharged to POTWs, EPA is currently studying the emission of volatile compounds and other toxic air pollutants from wastewater treatment plants (both direct and indirect dischargers). The emphasis is on emissions from the organic chemicals, plastic, and synthetic fibers industrial category and the pharmaceutical and pesticide manufacturing categories. EPA is also developing test methods to identify other process wastestreams rich in volatile organic compounds. EPA is using data from this study to evaluate air emissions caused by volatilization formed from the treatment of wastewaters (by such means as air stripping) and is also considering possible regulation of such emissions under the Clean Air Act, which eventually reduce the amount of volatile compounds entering wastewater treatment plants.

EPA is also conducting a study to evaluate the extent of groundwater contamination caused by leaking sewers (see 52 FR 23485, June 22, 1987). If this study indicates that such contamination is widespread, EPA will evaluate the possibility of requiring POTWs to develop any local limits needed to prevent violation of any groundwater protection standards to which the POTW may be subject.

G. Enforcement of Categorical Standards

The Study recommended that EPA pursue more stringent enforcement of

categorical pretreatment standards. More rigorous enforcement could lead to a significant reduction of pollutant loadings to POTWs, particularly of heavy metals. More stringent enforcement of the standards was also recommended by the Pretreatment Implementation Review Task Force (PIRT) which in 1985 gave the Agency recommendations for improving the national pretreatment program. The ANPR discussed several of EPA's initiatives to improve local enforcement, including guidance, audits and inspections of approved pretreatment programs, expanded self-monitoring requirements, and enforcement actions against POTWs with unimplemented programs.

The commenters on the ANPR generally supported these means of improving the enforcement of categorical pretreatment standards. In response to these comments, EPA will continue to emphasize all activities designed to better POTWs' ability to enforce compliance with these standards.

EPA is today proposing certain other changes to the general pretreatment regulations which it believes will help POTWs enforce their local pretreatment programs and improve control of toxic and hazardous wastes discharged to POTWs. These proposed changes are discussed below.

1. Revisions to Local Limits

On October 17, 1988 (53 FR 40562) EPA revised 40 CFR 403.8(f) by clarifying that the development of local limits (or a demonstration that they are not necessary) is a prerequisite to approval of a POTW pretreatment program and the continuing legal acceptability of an approved program. Although the regulatory language of that rule does not explicitly require POTWs to update local limits, the preamble of the June 12, 1986 proposal to that rule stated that "local limits * * * must be updated as necessary to reflect changing conditions at the POTW" (51 FR 21459) and that "failure to * * * update, as needed, necessary local limits, will, of course, continue to be subject to enforcement, * * * as a violation of the POTW's permit" (51 FR 21460).

In order to completely clarify this requirement, and because of the importance of up-to-date local limits in controlling the discharges of toxic and hazardous pollutants, EPA is today proposing to add 40 CFR 122.21(j)(2) to provide that POTW's must evaluate in writing the need to update their local limits as part of their NPDES permit applications (i.e., once every five years

at a minimum). If the Director determines that a particular POTW should evaluate the need for revision more often, it may so specify in the POTW's permit or approved pretreatment program (as incorporated by reference in the permit).

Today's proposal would not require POTWs to update their local limits when such revision is not needed. Instead, EPA is proposing to establish a minimum frequency for formal evaluation of the need for revised limits. Examples of events that might indicate the need for such a revision include changes in the POTW's NPDES permit, changes in sludge disposal standards or POTW sludge disposal methods, modifications to the treatment plant, addition or deletion of significant industrial users, and changes in industrial users' processes or pretreatment operations. These events could all affect the likelihood of interference with POTW operations or possible lack of compliance with the POTW's NPDES permit. The proposed minimum frequency should give POTWs more precise notice of their legal responsibilities and should help EPA enforce pretreatment implementation. The proposed frequency should also help POTWs be more effective in preventing pass through and interference caused by the discharge of toxic and hazardous wastes.

EPA solicits comment on whether POTWs should be required to conduct this evaluation more frequently. For example, POTWs might be required to conduct the evaluation whenever multiple instances of pass through or interference had occurred (such as two or more violations in a quarter), in order to determine whether existing local limits were adequate to prevent these occurrences or whether local enforcement efforts were adequate. POTWs might also be required to submit such evaluations once a year as part of the annual reports to the Approval Authority required under 40 CFR 403.8(i). The Agency welcomes comment on how frequently local limits should be examined to ascertain whether they need to be revised.

2. Inspections and Samplings of Significant Industrial Users by POTWs

The existing regulations (40 CFR 403.8(f)(2)(v)) require that a POTW must be able to randomly sample and analyze the effluent from industrial users and conduct surveillance and inspections to identify noncompliance with pretreatment standards. However, these regulations do not specify how often POTWs must perform the sampling, analysis and surveillance.

In the 1986 *Pretreatment Compliance Monitoring and Enforcement Guidance* (hereinafter "1986 Guidance"), the Agency recommended that POTWs conduct at least one inspection and/or sampling visit annually to all "significant industrial users." According to the Guidance, the term "significant industrial user" includes all categorical users and any noncategorical industrial user that discharges 25,000 gallons per day or more of process wastewater, contributes a process wastestream which make up 5 percent or more of the average dry weather capacity of the treatment plant, or has a reasonable potential, in the opinion of the Control Authority, to adversely affect the POTW's operation. The Control Authority, with the consent of the Approval Authority, may remove any noncategorical industrial user from the list of significant industrial users if the industrial user has no reasonable potential to adversely affect the POTW or to violate any pretreatment standards or requirements. EPA is today proposing that the consent of the Approval Authority is not required when the industrial user would have been designated as significant only because of an average process wastewater flow of 25,000 gallons per day or more. Noncategorical industrial users may also petition to be removed from the significant industrial user list. For example, if the significant noncategorical industrial user has an exemplary compliance record, is not likely to contribute to instances of interference, and has little potential to contribute to any water quality problems, the POTW may wish to delete that user from the list. Alternatively, EPA emphasized in the Guidance that more frequent monitoring should probably be conducted in certain cases: e.g., if an industrial user has not been able to comply with pretreatment standards. POTWs may of course add an industrial user to the list even if that user was previously deleted, if compliance problems of any other circumstances arise which make such an addition appropriate.

In order to specify a standard for how often POTWs must inspect and sample the effluent of their significant industrial users, EPA is today proposing to modify 40 CFR 403.8(f)(2)(v) to require POTWs to inspect and sample all "significant industrial users" at least once every two years. EPA believes that inspection and sampling of these users at least this often should help POTWs avert pass through and interference by keeping better track of the larger industrial discharges into their treatment and

collection systems (especially discharges of toxic and hazardous pollutants). The proposed amendments should also provide a uniform program requirement that EPA can readily enforce if necessary.

As discussed in Part II-B above, the Agency is also proposing to amend § 403.8(f)(2)(v) to require POTWs to evaluate at the time of inspection whether the significant industrial user in question should have a slug control plan for the prevention and control of spills or batch discharges that could cause interference at the POTW.

To ensure that POTWs update their lists of significant industrial users, the Agency is also proposing to amend 40 CFR 403.12(i)(1) to require POTWs to identify such users in the updated list of all industrial users required to be submitted to the Approval Authority under 40 CFR 403.12(i). In addition, EPA is proposing to amend 40 CFR 403.8(f)(2)(iii) to require that, within 30 days after a POTW's establishment or revision of its list of significant industrial users, the POTW must inform all such newly designated users of their status and the applicable requirements of this status.

Because several of the proposals today affect requirements applicable to significant industrial users, EPA believes that it would be appropriate to propose a regulatory definition of this term for the sake of national consistency and program enforceability. For this reason, EPA is proposing to amend 40 CFR 403.3 to add a new definition of "significant industrial user" which is similar to the definition in the 1986 Guidance, since that definition has so far proved to be a useful tool in distinguishing the more important indirect dischargers.

EPA solicits comment on all of the rule changes proposed above. Specifically, the Agency requests comment on whether to require that pretreatment POTWs sample and inspect all significant industrial users at least once a year, or whether the currently proposed frequency of at least once every two years will better enable the POTW to plan for inspections while still collecting useful and current discharge information. Alternatively, EPA solicits comment on whether today's proposed requirement of a minimum sampling and inspection frequency is redundant in light of other existing or proposed requirements for self-monitoring and reporting by indirect dischargers, such as twice-yearly sampling and reporting by all categorical and significant non-categorical industrial users,

requirements to report a substantial change in the volume or character of pollutants discharged, and requirements to notify the POTWs of any discharge of hazardous wastes. The Agency also requests comment on whether to require that POTWs target certain compounds or classes of compounds in their sampling, such as the RCRA Appendix IX hazardous constituents. The Agency also solicits comment on the appropriateness of the proposed definition of significant industrial user, and on whether to allow POTWs to delete categorical users from the list of significant industrial users. It has been suggested that some categorical users do not present any potential for pass through or interference and that POTWs should therefore be free to delete them from the list of significant industrial users. Similarly, EPA requests comment on whether the flow criterion of 25,000 gallons per day for non-categorical significant industrial users is appropriate. The Agency has traditionally used the 25,000 gallons per day criterion in guidance documents. That number represents 5 percent of the hydraulic capacity of the smallest POTWs which EPA may require to have an approved pretreatment program (i.e., those POTWs with half a million gallons per day of design flow capacity). However, EPA solicits comment on whether a larger flow criterion (such as 50,000 gallons per day) would be more useful as a guideline for identifying those industrial users with the capacity for adversely affecting most POTWs.

In addition, EPA wishes to receive comment on the role of the Approval Authority in designating significant industrial users. Specifically, the Agency requests comment on whether the Control Authority should be required to obtain the agreement of the Approval Authority before choosing not to designate (or removing from the list) an industrial user who would otherwise be included because of the proposed criteria.

The Agency also solicits comment on expanding the definition of significant industrial user to include notifiers of hazardous waste discharges under proposed § 403.12(p). Since inclusion in the definition may carry certain administrative consequences for those notifiers in approved pretreatment programs (self-monitoring, inspections, individual control mechanisms, and slug control plans), the Agency welcomes comment on whether any or all of these requirements would be appropriate for some or all dischargers of hazardous wastes.

In addition, the Agency solicits comment on the usefulness of requiring POTWs to estimate, in the annual reports submitted to the Approval Authority under § 403.8(i), whether the amount of hazardous wastes received during the last calendar year has changed significantly and whether any change has affected operations at the POTW.

3. Enforcement Response Plans for POTWs

The existing general pretreatment regulations do not clearly specify the enforcement requirements applicable to POTWs with approved pretreatment programs. The only specific enforcement sanction identified is the requirement that POTWs publish the names of significant noncompliers in the largest local daily newspaper. The regulations require POTW program submissions to identify how the POTW intends to ensure compliance; they also require POTWs to enforce all pretreatment standards and requirements against industrial users and obtain remedies for noncompliance (40 CFR 403.8(f)(1)). However, POTWs are not informed specifically what their legal responsibilities are in carrying out enforcement actions. This also complicates EPA's task in enforcing this part of approved pretreatment programs, since evaluation of POTW enforcement is difficult when the procedures contained in the approved program are not sufficiently specific.

EPA Regions and NPDES States have Enforcement Management Systems in operation for direct dischargers. In the 1986 Guidance, the Agency encouraged each POTW to develop an Enforcement Response Guide, which is a set of procedures describing how the POTW will investigate industrial user violations and which corrective or enforcement actions the POTW will take to respond to such violations (the Guidance suggested certain procedures). To ensure that POTWs develop and implement specific enforcement procedures, EPA is proposing today to amend 40 CFR 403.8(f) to require all POTWs with pretreatment programs to develop and implement an enforcement response plan describing how the POTW will investigate and respond to instances of industrial user noncompliance, including time frames within which the responses will take place.

The Agency believes that the process of developing these plans will be very valuable in helping POTWs decide what resources are needed to enforce their pretreatment standards and how they will actually deal with industrial user

violations. Such plans will also make it much easier for EPA to determine whether a POTW is complying with its pretreatment implementation requirements for enforcement. The proposed rule will not interfere with the ability of POTWs to carry out their programs in a manner suited to their needs, nor should such a plan be difficult to develop. The 1986 Guidance included detailed suggestions on various appropriate responses to many different kinds of noncompliance. The POTW should use both the Guidance and its own expertise to develop a reasonable plan to address and remedy noncompliance.

EPA solicits comments on this proposal. Specifically, the Agency requests comments on whether to include more specific elements in the enforcement response plan. Although the Agency believes that the maximum degree of flexibility is needed for POTWs to address their particular problems, it is possible that certain elements of such plans might be suitable for uniform application. EPA welcomes comment on this issue.

4. Definition of Significant Violation

The existing regulations (40 CFR 403.8(f)(2)(vii)) require Control Authorities to publish, in the daily newspaper with the largest circulation in the service community, a list of industrial users which had significant violations of applicable pretreatment standards and requirements during the previous twelve months. The list must be published at least once a year. "Significant violation" is defined as a violation which remains uncorrected 45 days after notification of noncompliance; which is part of a pattern of noncompliance over a twelve-month period; which involves a failure to accurately report noncompliance; or which resulted in the POTW exercising its emergency authority under 40 CFR 403.8(f)(1)(vi)(B).

This definition paralleled the criteria for submitting Quarterly Noncompliance Reports (QNCRs) on direct dischargers. QNCRs are submitted by States with approved NPDES programs or by EPA Regions for States without such programs. The Agency uses QNCRs to track the progress and measure the effectiveness of NPDES compliance and enforcement against direct dischargers. However, in 1985 EPA revised the criteria for the types of violations required to be reported in QNCRs. The revisions, besides containing more precise language, established technical review criteria (TRC) to be used for reporting certain effluent violations. The

TRCs were based on the magnitude and/or duration of the violations.

The 1986 Guidance included a detailed description of significant violations by industrial users which substantially mirrored these new criteria for the violations required to be reported in QNCRs. In the Guidance, EPA recommended the national use of this definition to identify the most serious violations by industrial users and to set priorities for enforcement actions.

Experience with the current definition of significant violation has shown that POTWs vary considerably in their definition and application of this interpretation when selecting which violations to publish in local newspapers. This is particularly true of deciding what constitutes a "pattern of noncompliance" under 40 CFR 403.8(f)(2)(vii). To eliminate these inconsistencies and to establish more parity between the treatment of violations committed by direct and indirect dischargers, the Agency is proposing today to amend §403.8(f)(2)(vii) to replace the definition of significant violation with a new definition which is substantially the same as the criteria for reporting direct discharger violations in QNCRs.

Under the definition proposed today, a POTW must publish in the largest daily newspaper a list of industrial users who were in significant violation in the previous twelve months. A violation would be significant if it met one or more of the following criteria:

(1) Chronic violations of wastewater discharge limits, i.e., those in which sixty-six percent or more of all of the measurements taken during a six-month period exceed (by any magnitude) the daily maximum limit or the average limit for the same pollutant parameter;

(2) Technical review criteria (TRC) violations, defined here as those in which thirty-three percent or more of all the measurements taken during a six-month period equal or exceed the product of the daily average maximum limit or the average limit times the applicable TRC (TRC = 1.4 for BOD, TSS, fats, oil and grease, and 1.2 for all other pollutants except pH);

(3) Any other violation of a pretreatment effluent limit (daily maximum or longer term average) that the Control Authority believes has caused, alone or in combination with other discharges, interference or pass through (including endangering the health of POTW personnel or the general public);

(4) Any discharge of a pollutant that has caused imminent danger to human health, welfare, or to the environment and has resulted in the POTW's exercise

of its emergency authority under paragraph (f)(1)(iv)(B) to halt or prevent such a discharge.

(5) Violation, by ninety days or more after the schedule date, of a compliance schedule milestone, contained in a local control mechanism or enforcement order, for starting construction, completing construction, or attaining final compliance;

(6) Failure to provide required reports such as baseline monitoring reports, 90-day compliance reports, periodic self-monitoring reports, and reports on compliance with compliance schedules within thirty days of the due date;

(7) Failure to accurately report noncompliance, or

(8) Any other violation or group of violations which the Control Authority considers to be significant.

The Agency believes that this proposed amendment gives POTWs more precise notice of their obligation to establish which industrial user violations must be published. EPA solicits comments on the appropriateness of the above criteria. The Agency emphasizes that industrial users would continue to be liable for any violation of applicable pretreatment requirements. Whether an industrial user is identified as being a significant violator does not determine the type of enforcement action that should be taken, including enforcement actions for lesser violations.

5. Reporting Requirements for Significant Industrial Users

40 CFR 403.12 describes the reports that industrial users who are subject to categorical pretreatment standards must submit to their control authorities. The existing regulations do not specifically require non-categorical industrial users to submit reports to the control authority regarding their compliance with applicable pretreatment requirements. On October 17, 1988, (53 FR 40562) EPA amended 40 CFR 403.12 to clarify that Control Authorities must require appropriate reporting from those industrial users with discharges not subject to categorical standards.

In order to ensure that this reporting is carried out regularly, the Agency is today proposing to amend 40 CFR 403.12(h) to require that all significant industrial users (as defined under proposed 40 CFR 403.3(u), including noncategorical significant users) must submit to their POTWs at least twice a year a description of the nature, concentration, and flow of pollutants selected for such reporting by the POTW. In addition, EPA is proposing to require all significant industrial users to base their reports on data obtained

through appropriate sampling and analysis performed during the period covered by the report, which data is representative of conditions occurring during the reporting period. Control Authorities or Approval Authorities may require more frequent monitoring or more detailed information in the report as appropriate. As mentioned above, the Agency is also proposing to amend 40 CFR 403.8 to require POTWs to inform significant industrial users of their status and the applicable requirements of this status.

EPA believes that these proposed requirements will give POTWs much more accurate knowledge of non-categorical wastes entering their treatment and collection systems. This knowledge is particularly important because many toxic and hazardous pollutants are not covered by categorical standards. EPA also believes that establishing minimum monitoring frequencies is the only way to ensure that the samples submitted to the POTW are representative and up to date.

The Agency solicits comment on this proposed change to the general pretreatment regulations. Specifically, EPA requests comment on the twice-yearly reporting frequency and on limiting the reporting requirements to significant industrial users as defined in proposed 40 CFR 403.3(u). EPA selected the twice-yearly frequency to be consistent with similar requirements for categorical industrial users, and has proposed to limit the requirements to significant noncategorical industrial users because these users seem likely to discharge the largest amounts of toxic and hazardous pollutants. In addition, the proposed definition of significant industrial users gives POTWs flexibility to add or delete industrial users as appropriate. The Agency also requests comment on whether to require significant industrial users to sample for certain compounds or classes of compounds, such as the RCRA Appendix IX hazardous constituents. EPA welcomes comment on these and other aspects of this proposed requirement.

H. Miscellaneous Amendments

In addition to the substantive regulatory changes proposed today, the Agency is also proposing to amend some possibly confusing language in the general pretreatment regulations to clarify current requirements and avoid misunderstandings. These proposed clarifications are discussed below.

1. Local Limits Development and Enforcement

40 CFR 403.5(c) provides that POTWs "developing" pretreatment programs must develop and enforce specific limits to implement the general and specific discharge prohibitions. In order to clarify that POTWs with already approved pretreatment programs must also develop and enforce local limits, EPA is today proposing to amend § 403.5(c) to provide that POTWs shall continue to develop and enforce appropriate local limits after developing an approved pretreatment program.

2. EPA and State Enforcement Action

40 CFR 403.5(e) summarizes the statutory procedures that EPA and NPDES States must follow under section 309(f) of the Clean Water Act to bring an enforcement action against an industrial user that has caused interference or pass through at a POTW, i.e., give the POTW 30 days notice to initiate its own enforcement action. However, § 403.5(e) may be misleading in not stating that this notice requirement only applies to federal enforcement under section 309(f) of the Act and not to other enforcement actions. In order to avoid misunderstanding, the Agency is today proposing to amend the title of § 403.5(e) to indicate that these notice procedures only apply to actions brought under section 309(f) of the Act.

3. National Pretreatment Standards: Categorical Standards

40 CFR 403.6 provides that categorical pretreatment standards, unless specifically noted otherwise, shall be in addition to the general prohibitions established in § 403.5. There appears to have been an omission from this provision of the specific discharge prohibitions. In order to rectify this omission, the Agency is proposing to amend § 403.6 to add that national pretreatment standards, unless specifically noted otherwise, shall be in addition to all prohibitions and limits established under § 403.5(c).

4. POTW Pretreatment Program Requirements: Implementation

40 CFR 403.8(f) establishes the requirements that a POTW pretreatment program must satisfy. Although these requirements must be met in order for a POTW's pretreatment program to be approved, the proposed regulatory language clarifies the implementation obligations for a POTW. The language of § 403.8(f)(1) now provides that a POTW must have the legal authority which enables it to deny, condition, and control pollutant contributions, require compliance by industrial users, conduct inspections of industrial users, and

perform other essential attributes of a pretreatment program. This language does not specifically state that POTWs must implement these procedures. In order to clarify this language, the Agency is today proposing to amend the introductory sentence of § 403.8(f) to state that "a POTW Pretreatment Program shall be developed *and implemented* to meet the following requirements". EPA is also proposing to amend the title of § 403.8 to read "POTW Pretreatment Programs: Development *and Implementation* by POTW" [emphasis added].

5. Development and Submission of NPDES State Pretreatment Programs

40 CFR 403.10(c) states that "the EPA shall * * * apply and enforce Pretreatment Standards and Requirements until the necessary implementing action is taken by the State". This sentence might give the wrong impression that the Agency will cease to enforce pretreatment requirements when a State has received program approval. Since this is not the case, EPA is today proposing to delete this sentence from § 403.10.

6. Administrative Penalties Against Industrial Users

The second to last sentence in 40 CFR § 403.8(f)(1)(vii)(B) states that "the Approval Authority shall have authority to seek *judicial* relief for noncompliance by Industrial Users when the POTW has acted to seek such relief but has sought a penalty which the Approval Authority finds to be insufficient [emphasis added]". Given EPA's new authority under the 1987 amendments to the Clean Water Act to assess administrative penalties, this provision is misleading because it could arguably be read to preclude the Agency from seeking such penalties from an industrial user that has already been subject to an action by the POTW. In order to correct this omission, the Agency is today proposing to amend § 403.8(f)(1)(vii)(B) to provide that the Approval Authority shall have the authority to seek judicial relief and also may have administrative authority when the POTW has acted to seek such relief but has sought a monetary penalty which the Approval Authority finds to be insufficient.

7. Provisions Governing Fraud and False Statements

40 CFR 403.12(n) regarding fraud and false statements incorrectly states that certain reporting requirements shall be subject to the provisions of section 309(c)(2) of the Clean Water Act. The reference should be to sections 309(c)(4) and (6) of the Act, as amended. EPA is today amending § 403.12(n) accordingly.

III. Executive Order 12291

Under Executive Order 12291, EPA must judge whether a regulation is "Major" and therefore subject to the requirement of a Regulatory Impact Analysis. Major rules are those which impose a cost on the economy of \$100 million or more annually or have certain other economic impacts. The Agency has determined that this proposed rule does not meet the criteria of a major rule as set forth in section 1(b) of the Executive Order. The Agency has completed a general estimate of the annual cost to industrial users and POTWs of the amendments proposed today, which is included in the administrative record for this rulemaking. This rule has been submitted to the Office of Management and Budget (OMB) for review.

IV. Regulatory Flexibility Analysis

The Regulatory Flexibility Act, 5 U.S.C. 601 *et seq.*, requires EPA and other agencies to prepare an initial regulatory flexibility analysis for all proposed regulations that have a significant impact on a substantial number of small entities. No regulatory flexibility analysis is required, however, where the head of the Agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Most of the amendments proposed today, if promulgated, will affect larger POTWs (those with approved pretreatment programs) and significant industrial users. I hereby certify, pursuant to 5 U.S.C. 605(b), that this regulation will not have a significant impact on a substantial number of small entities.

V. Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.*, EPA must submit any rule that contains information collection requirements to the Director of OMB for review and approval. The information collection requirements in this proposed rule have been submitted to OMB for review.

List of Subjects

40 CFR Part 122

Administrative practice and procedure, Reporting and recordkeeping requirements, Water pollution control, Confidential business information.

40 CFR Part 403

Confidential business information, Reporting and recordkeeping requirements, Waste treatment and disposal, Water pollution control.

Date: November 14, 1988.

Lee M. Thomas,
Administrator.

For the reasons explained in the preamble, Part, 122 and 403 of Chapter I of Title 40 of the Code of Federal Regulations are proposed to be amended as follows:

PART 122—NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

40 CFR Part 122 is amended as follows:

1. The authority citation for Part 122 continues to read as follows:

Authority: Clean Water Act, 33 U.S.C. 1251 et seq.

2. Section 122.21 is proposed to be amended by adding paragraphs (j) (1) and (2) to read as follows:

§ 122.21 Application for a permit.

(j) * * *

(1) All existing POTWs shall provide the following information to the Director:

(i) Results of whole effluent biological toxicity screening, conducted as follows:

(A) For POTWs with a dilution ratio between the receiving stream low flow rate and the effluent design flow rate of less than 10,000 to 1 but greater than 1,000 to 1, or with a poorly mixed effluent plume in a receiving water of concern:

Collect six effluent samples in one day (grab or short-term composite) each quarter over a one-year period. Conduct twenty-four hour screening tests for acute toxicity in 100% final effluent, using an invertebrate species and a fish species in each sample, and following the protocols specified in *Methods for Measuring the Acute Toxicity of Effluents to Aquatic Organisms*, Peltier, W. and C.I. Weber, 3rd edition, 1985, EPA 600/4-85-013. The Director may require alternative test procedures and may require the submission of definitive testing data, generated according to procedures specified by the Director, to replace or supplement the screening test data specified above.

(B) For POTWs with a dilution ratio between the receiving stream low flow rate and the effluent design flow rate of less than 1,000 to 1 but greater than 100 to 1: Collect six effluent samples (24-hour composite) on six successive days each quarter over a one-year period. Conduct seven-day static screening test for chronic toxicity in 100% final effluent, using an invertebrate species and a fish species in each sample, daily composite samples to renew test

solutions, and following protocols specified by the Director. The Director may require alternative test procedure and may require the submission of definitive testing data, generated according to procedures specified by the Director, to replace or supplement the screening test data specified above.

(c) For POTWs with a dilution ratio between the receiving stream low flow rate and the effluent design flow rate of less than 100 to 1, results of definitive toxicity data generation according to procedures required by the Director.

(ii) [Reserved]

(2) All POTWs with approved pretreatment programs shall provide the following information to the Director: A formal evaluation of the need to revise local limits under 40 CFR 403.5(c)(1).

PART 403—GENERAL PRETREATMENT REGULATIONS FOR EXISTING AND NEW SOURCES

1. The authority citation for Part 403 continues to read as follows:

Authority: Sec. 54(c)(2) of the Clean Water Act of 1977 (Pub. L. 95-217), secs. 204(b)(1)(C), 208(b)(2)(C)(iii), 301(b)(1)(A)(ii), 301(b)(2)(A)(ii), 301(b)(2)(C), 301(h)(5), 301(i)(2), 304 (e) and (g), 307, 308, 309, 402(b), 405 and 501(a) of the Federal Water Pollution Control Act (Pub. L. 92-500), as amended by the Clean Water Act of 1977 and the Water Quality Act of 1987.

2. Section 403.3 is proposed to be amended by redesignating existing paragraphs (e) through (s) and (t) as paragraphs (f) through (t) and (v), designating new paragraph (o) as paragraph (o)(1), and adding new paragraphs (e), (o)(2) and (u) as follows:

§ 403.3 Definitions.

* * * * *

(e) The term "CWT" means a commercial centralized waste treatment facility (other than a landfill or an incinerator) which treats or stores aqueous wastes generated by facilities not located on the site of the CWT and which disposes of these wastes by introducing them to a POTW.

* * * * *

(o)(2) In the case of POTWs receiving discharges from CWTs as defined in § 403.3(e), pass through also means the failure of the CWT and the POTW to reduce pollutant discharges from the POTW to the degree which would be required under section 301(b)(2) of the CWA if the CWT discharged directly to surface waters.

* * * * *

(u) the term "Significant Industrial User" means:

(1) All dischargers subject to Categorical Pretreatment standards under § 403.6 and 40 CFR Chapter I, Subchapter N; and

(2) All noncategorical dischargers that, in the opinion of the Control Authority, have a reasonable potential to adversely affect the POTW's operation, or that contribute a process wastestream which makes up 5 percent or more of the average dry weather capacity of the POTW treatment plant, or that discharge an average of 25,000 gallons per day or more of process wastewater to the POTW. However, the Control Authority need not designate as Significant any noncategorical Industrial User that, in the opinion of the Control Authority and with the agreement of the Approval Authority, has no potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement. The agreement of the Approval Authority is not necessary in cases where the noncategorical discharger would have been designated as significant only because of an average discharge of 25,000 gallons per day or more of process wastewater. However,

(3) Any noncategorical Industrial Use designated as Significant may petition the Control Authority to be deleted from the list of Significant Industrial Users on the grounds that it has no potential for adversely affecting the POTW's operation or violating any pretreatment standard or requirement.

3. Section 403.5 is proposed to be amended by revising paragraphs (b)(1), adding text to the end of (c)(1), revising the title of paragraph (e), and adding new paragraphs (b)(6) and (b)(7) to read as follows:

§ 403.5 National pretreatment standards: prohibited discharges.

* * * * *

(b) * * *

(1) Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, pollutants with a closed cup flashpoint of less than 140 degrees Fahrenheit (sixty degrees Centigrade), as determined by a Pensky-Martens Closed Cup Tester, using the test method specified in ATSM standard D-93-79 or D-93-80k (incorporated by reference, see § 260.11) or a Setaflash Closed Cup Tester, using the test method specified in ATSM Standard D-3278-78 (incorporated by reference, see § 260.11) and pollutants which cause an exceedance of 10% of the lower

explosive limit (LEL) at any point within the POTW.

(6) Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute workers health and safety problems.

(7) Any trucked or hauled pollutants, except at discharge points designated by the POTW.

(c) * * *

(1) * * * Each POTW with an approved Pretreatment Program shall continue to develop these limits as necessary and effectively enforce such limits. Such POTWs shall implement the prohibition in paragraph (b)(6) of this section by establishing numerical discharge limits or other controls where necessary based on existing human toxicity criteria or other information. Such POTWs receiving discharges from CWTs as defined in § 403.3(e) shall develop and enforce specific limits for those facilities to prevent pass through as defined in § 403.3(o)(2).

(e) *EPA and Stated enforcement actions under section 309(f) of the CWA.* * * *

4. § 403.6 is proposed to be amended by revising the introductory text to read as follows:

§ 403.6 National Pretreatment Standards: Categorical Standards.

National Pretreatment Standards specifying quantities or concentrations of pollutants or pollutant properties which may be discharged to a POTW by existing or new Industrial Users in specific industrial subcategories will be established as separate regulations under the appropriate subpart of 40 CFR Chapter I, Subchapter N. These standards, unless specifically noted otherwise, shall be in addition to all prohibitions and limits established under § 403.5(c).

5. § 403.8 is proposed to be amended by revising the Section heading, the introductory text paragraph (f), redesignating paragraphs (f)(1)(iii) through (f)(1)(vii) as (f)(1)(iv) through (f)(1)(viii), revising paragraphs (f)(1)(vii)(B), (f)(2)(v), and (f)(2)(vii), adding text to the end of (f)(1)(iv), and (f)(2)(iii), and adding new paragraphs (f)(1)(iii) and (f)(5) to read as follows:

§ 403.8 Pretreatment Program Requirements: Development and Implementation by POTW.

(f) *POTW pretreatment requirements.*

A POTW Pretreatment Program shall be developed and implemented to meet the following requirements:

(1) * * *

(iii) Develop local limits for commercial aqueous off-site waste treaters (CWTs, as defined in § 403.3(e)) based upon a best professional judgment (BPJ) determination of the best available technology economically achievable (BAT).

(iv) * * * In the case of Industrial Users identified as significant under § 403.3(u), this control shall be achieved through discharge permits or equivalent individual control mechanisms issued to each such user. Such permits or other control mechanisms must contain, at a minimum, the following conditions:

(A) Statement of duration (in no case more than five years);

(B) Statement of non-transferability of the permit without prior POTW approval;

(C) Applicable effluent limits based on categorical pretreatment standards and local limits;

(D) Applicable monitoring, sampling, and reporting requirements;

(E) Notification requirements for slug discharges as defined in § 403.5(b); and

(F) Statement of applicable civil and criminal penalties for violation of pretreatment standards and requirements.

(vii) * * *

(B) Pretreatment Requirements which will be enforced through the remedies set forth in paragraph (f)(1)(vii)(A) of this section, will include but not be limited to, the duty to allow or carry out inspections, entry, or monitoring activities; any rules, regulations, or orders issued by the POTW; or any reporting requirements imposed by the POTW or these regulations. The POTW shall have authority and procedures (after informal notice to the discharger) immediately and effectively to halt or prevent any discharge of pollutants to the POTW which reasonably appears to present an imminent endangerment to the health or welfare of persons. The POTW shall also have authority and procedures (which shall include notice to the affected Industrial Users and an opportunity to respond) to halt or prevent any Discharge to the POTW which presents or may present an endangerment to the environment or which threatens to interfere with the operation of the POTW. The Approval Authority shall have authority to seek judicial relief and may also seek administrative relief when the POTW has sought to seek such relief but has sought a monetary penalty which the

Approval Authority believes to be insufficient.

(2) * * *

(iii) * * * Notify each newly designated Significant Industrial User of its status and of all requirements applicable to such users within 30 days after designation as such.

(v) Randomly sample and analyze the effluent from Industrial Users and conduct surveillance and inspection activities in order to identify, independent of information supplied by Industrial Users, occasional and continuing noncompliance with Pretreatment Standards. Inspect and sample the effluent from each Significant Industrial User that discharges into the POTW at least every two years, and evaluate, at the time of such sampling or inspection, whether each such significant industrial user needs a plan to prevent and control slug discharges as defined under § 403.5(b). The results of such activities shall be made available to the Approval Authority upon request. If the POTW decides that such a plan is needed, each plan shall contain, at a minimum, the following elements:

(A) Description of discharge practices, including non-routine batch discharges;

(B) Description of stored chemicals;

(C) Procedures for promptly notifying the POTW of slug discharges as defined under § 403.5(b), with procedures for follow-up written notification within five days;

(D) Any necessary procedures to prevent accidental spills, including maintenance of storage areas, handling and transfer of materials, loading and unloading operations, and control of plant site run-off;

(E) Any necessary measures for building containment structures or equipment;

(F) Any necessary measures for controlling toxic organic pollutants (including solvents);

(G) Any necessary procedures and equipment for emergency response;

(H) Any necessary follow-up practices to limit the damage suffered by the treatment plant of the environment.

(vii) Comply with the public participation requirements of 40 CFR Part 25 in the enforcement of National Pretreatment Standards. These procedures shall include provision for at least annual public notification, in the largest daily newspaper published in the municipality in which the POTW is located, of Industrial Users which, at

any time during the previous twelve months, were in significant violation of applicable Pretreatment Standards or Pretreatment Requirements. For the purposes of this provision, an Industrial User is in significant violation if its violations meet one or more of the following criteria:

(A) Chronic violations of wastewater discharge limits, defined here as those in which sixty-six percent or more of all of the measurements taken during a six-month period exceed (by any magnitude) the daily maximum limit or the average limit for the same pollutant parameter;

(B) Technical review criteria (TRC) violations, defined here as those in which thirty-three percent or more of all of the measurements taken during a six-month period equal or exceed the product of the daily average maximum limit or the average limit times the applicable TRC (TRC=1.4 for BOD, TSS, fats, oil and grease, and 1.2 for all other pollutants except pH);

(C) Any other violation of a pretreatment effluent limit (daily maximum or longer-term average) that the Control Authority believes has caused, alone or in combination with other discharges, interference or pass through (including endangering the health of POTW personnel or the general public);

(D) Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or to the environment and has resulted in the POTW's exercise of its emergency authority under paragraph (f)(1)(vii)(B) of this section to halt or prevent such a discharge;

(E) Violation, by ninety days or more after the schedule date, of a compliance schedule milestone contained in a local control mechanism or enforcement order, for starting construction, completing construction, or attaining final compliance;

(F) Failure to provide required reports such as baseline monitoring reports, 90-day compliance reports, periodic self-monitoring reports, and reports on compliance with compliance schedules within thirty days of the due date;

(G) Failure to accurately report noncompliance; or

(H) Any other violation or group of violations which the Control Authority considers to be significant.

(5) The POTW shall develop and implement an Enforcement Response Plan. This Plan shall contain detailed procedures indicating how a POTW will investigate and respond to instances of

Industrial User noncompliance. At a minimum, this Plan shall:

(i) Describe how the POTW will investigate instances of noncompliance;

(ii) Describe the types of escalating enforcement responses the POTW will take in response to all anticipated types of Industrial User violations and the time periods within which responses will take place;

(iii) Adequately reflect the POTW's primary responsibility to enforce all applicable Pretreatment Requirements and Standards, as detailed in §§ 403.5 and 403.8(f) (1) and (2).

§ 403.10 [Amended]

6. § 403.10 is proposed to be amended by removing the first sentence in paragraph (c).

7. § 403.12 is proposed to be amended by adding text to the end of paragraph (h) by revising paragraphs (i)(1), (j), and (n), and adding new paragraph (p) to read as follows:

§ 403.12 Reporting requirements for POTWs and Industrial Users

(h) * * * Significant Industrial Users shall submit to the Control Authority at least twice a year a description of the nature, concentration, and flow of the pollutants required to be reported by the Control Authority. These reports shall be based on sampling and analysis performed in the period covered by the report, and performed in accordance with the techniques described in 40 CFR Part 136 and amendments thereto. Where 40 CFR Part 136 does not contain sampling or analytical techniques for the pollutant in question, or where the Administrator determines that the Part 136 sampling and analytical techniques are inappropriate for the pollutant in question, sampling and analysis shall be performed by using validated analytical methods or any other applicable sampling and analytical procedures, including procedures suggested by the POTW or other persons, approved by the Administrator.

* * * * *

(i) * * *

(1) An updated listed of the POTW's Industrial Users, including their names and addresses, or a list of deletions and additions keyed to a previously submitted list. The POTW shall provide a brief explanation of each deletion. The list shall identify which Industrial Users are Significant Industrial Users and provide a brief explanation of why any noncategorical discharger with an average flow of 25,000 gallons per day or more of process wastewater was not designated as a Significant Industrial User. The list shall also identify those

Industrial Users which are subject to categorical Pretreatment Standards and specify which Standards are applicable to each Industrial User.

* * * * *

(j) *Notification of changed discharge.* All Industrial Users shall promptly notify the POTW in advance of any substantial change in the volume or character of pollutants in their discharge, including the listed or characteristic hazardous wastes for which the Industrial User has submitted initial notification under § 403.12(p).

* * * * *

(n) *Provisions governing Fraud and False statements:* The reports required to be submitted under this section shall be subject to the provisions of 18 U.S.C. section 1001 relating to fraud and false statements and the provisions of sections 309(c) (4) and (6) of the Act, as amended, governing false statements, representation or certifications in reports required under the Act.

* * * * *

(p) *Notification of the discharge of hazardous wastes.* (1) The Industrial User shall notify the POTW, the EPA Regional Waste Management Division Director, and State hazardous waste authorities of any discharge into the POTW of a substance which is a listed or characteristic waste under section 3001 of RCRA. Such notification must include a description of any such wastes discharged, specifying the volume and concentration of such wastes and the type of discharge (continuous, batch, or other), identifying the hazardous constituents contained in the listed wastes, and estimating the volume of hazardous wastes expected to be discharged during the following twelve months. The notification must take place within 180 days of the effective date of this rule. This requirement shall not apply to pollutants already reported under the self-monitoring requirements of § 403.12(b), (d), and (e).

(2) Dischargers are exempt from the requirements of paragraph (p)(1) of this section during a calendar month in which they generate no more than 100 kilograms of hazardous wastes, unless the wastes are acute hazardous wastes as specified in 40 CFR 261.5(e), (f), (g), and (j). Generation of more than one hundred kilograms of hazardous wastes in any given month requires a one-time notification. Subsequent months during which the industrial user generates more than one hundred kilograms of hazardous waste do not require additional notification, except for the acute hazardous wastes specified in 40 CFR 261.5(e), (f), (g), and (j).

(3) In the case of new regulations under section 3001 of RCRA identifying additional characteristics of hazardous waste or listing any additional substance as a hazardous waste, the industrial user must notify the POTW of the discharge of such substance within 90 days of the effective date of such

regulations, except for the exemption in paragraph (p) (2) of this section.

(4) In the case of any notification made under this paragraph (p) of this section, the industrial user shall certify that it has a program in place to reduce the volume and toxicity of wastes generated to the degree it has

determined to be economically practicable and that it has selected the method of treatment, storage, or disposal currently available which minimizes the present and future threat to human health and the environment.

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